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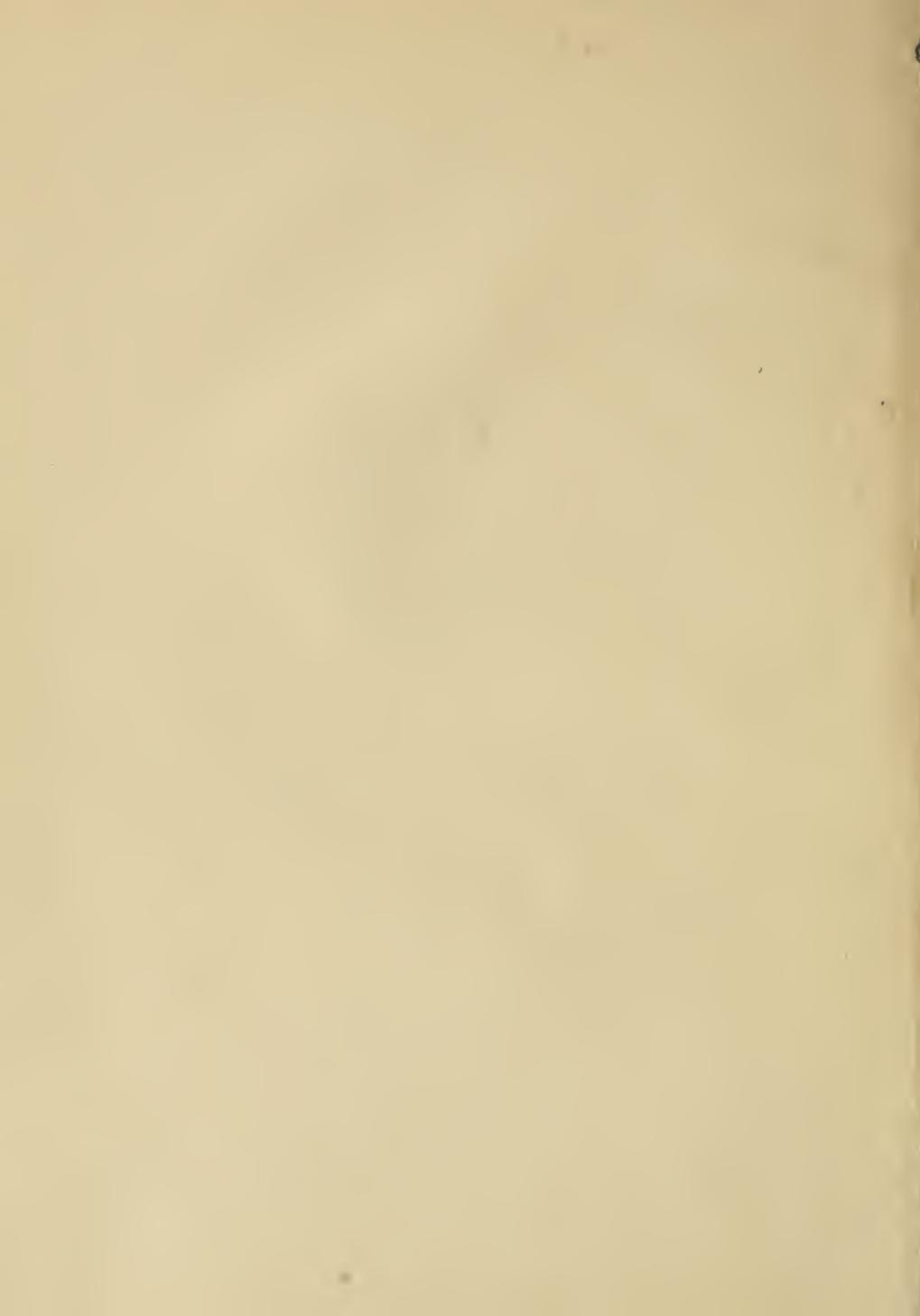


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Containing the

### OFFICIAL RULES

for

## Swimming, Water Polo Water Basket Ball

*As Arranged and  
Codified by the*

NATIONAL COLLEGIATE  
ATHLETIC ASSOCIATION

Committee on Swimming and  
Water Sports

Edited by F. W. LUEHRING

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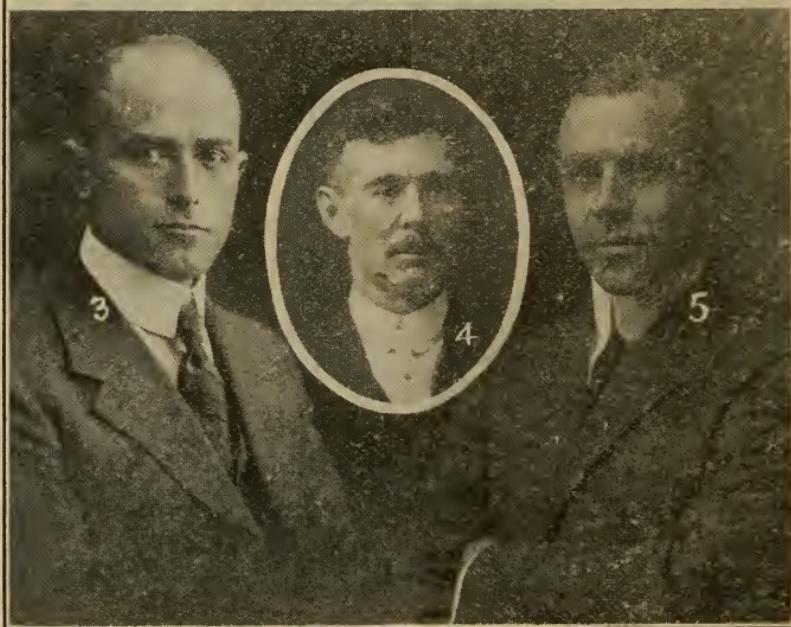
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# Intercollegiate Swimming Guide

1915-16

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AS ARRANGED AND CODIFIED BY THE

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Committee on Swimming and Water Sports

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## NOTICE

Photos, Records of Games, Suggestions for Changes in Rules, and other information should be in possession of the Editor by May 1, 1916, if they are to be included in the 1916-17 Guide. Photos should be properly packed and the names of the players clearly written (typewritten preferred) and attached to the back. Records and names must be legible to insure accuracy.

## Introduction

*By F. W. Luehring.*

The growing interest in intercollegiate swimming and water games has increasingly emphasized the need, in these sports, for uniform conditions of competition. The rules for swimming and for water games have been generally far from satisfactory and have varied greatly in different sections of the country.

For years the best rules available for swimming and water polo were those of the Amateur Athletic Union. Although the swimming code of this organization had many admirable features and was in general use in college swimming, it offered no program or order of events adapted to the needs of college meets. The Intercollegiate Swimming Association and the Western Intercollegiate Conference Swimming Association each modified these rules by the selection of a program and order of events which, unfortunately, differed from each other in a number of important respects. This variation has not only hampered intersectional contests, but also has left unsolved the question of the ideal program and order for intercollegiate dual and championship meets.

The game of water polo, as at first devised, possessed elements of attraction in spite of the fact that it was poorly organized and its rules abounded in loosely worded phrases, which rival teams not infrequently warped to their advantage, with the result that the game soon became uncontrollable in the large rival athletic clubs. The Graduate Advisory Committee of the Intercollegiate Swimming Association, however, starting with the same code, gradually improved the rules and the administration of the game, with the result that in over a decade there has been not a single serious injury to any college player, and the game has come to be one of the most popular of the indoor sports.

Unfortunately, however, the excellent work of the Intercollegiate Swimming Association in improving the water polo rules was directly accessible only to the five colleges comprising its membership. In the meantime the constantly growing body of colleges entering competitive swimming had no swimming rules of their own. The field of possible water games, and swimming in its wider aspects, remained undeveloped, and, above all, there existed no central collegiate organization which might put into the form of rules the best available information on form swimming, graded swimming, life saving, and other water contests,

thereby unifying and correlating swimming activities for all educational institutions.

To meet this general situation the National Collegiate Athletic Association, at its meeting in New York on December 30, 1913, appointed a committee, consisting of Dr. R. Tait McKenzie (Pennsylvania), chairman, Dr. P. W. Withington (Harvard), Dr. Dudley B. Reed (University of Chicago), and F. W. Luehring (Princeton), to attempt a solution of the problems involved. This committee held its first annual meeting in Chicago in December of 1914. At this time conferences were held with the leading Eastern and Western swimming authorities. After sessions on two successive days, a program of events, order of events, and a body of rules for swimming and water polo were worked into shape. The rules in their suggested form were adopted by the National Collegiate Athletic Association and the committee instructed to continue the work of standardization.

After presenting this report Dr. McKenzie found it necessary, because of the pressure of other duties, to resign from the committee. The National Collegiate Athletic Association thereupon appointed Dr. Withington as chairman and Professor R. F. Nelligan of Amherst as a new member. Early last summer Dr. Withington joined the Harvard Surgical Unit for Red Cross work in Europe and turned the duties of the chairmanship over to the editor. This reorganized committee, having profited greatly by criticisms and suggestions of college swimming authorities from the East and the West at the Chicago meeting and from valuable help received from swimming experts not engaged in college work, from the Amateur Athletic Union and the Amateur Swimming Association of England, set about the task of embodying in the rules, so far as possible, all suggestions of evident value.

The work of the committee during the past year has been centered on swimming and water polo. In swimming we have prepared a standard program and order of events which is recommended for dual and for championship meets, a more clear and definite formulation and revision of rules for the various events, with special attention to the breast stroke, back stroke, plunge, diving board, and, in the article on "Instructions to Judges and Contestants in Fancy Diving," a beginning has been made of the difficult task of analyzing the various possible dives into their constituent elements of good form.

In water polo the best rules available have been carefully reworded and recodified, loosely worded phrases eliminated, and a number of drastic changes introduced which, it is hoped, will prevent the development of some undesirable practices.

Fouls have been classified into three groups, as technical, personal, and disqualifying, with graded penalties for each type of misconduct, ranging from a free throw at an unguarded goal from the 20-foot mark for minor infractions up to suspension or disqualification for unnecessary roughness or unsportsman-like conduct. As a result, we believe the new code represents a very distinct improvement in logical arrangement, precision of statement, provision for adequate penalties, and that its use will facilitate the administration and control of the game.

The committee has been greatly assisted in its work by the co-operation of college swimming coaches of the East and West and swimming experts generally. Special mention should be made, however, of the invaluable help given by Mr. Frank J. Sullivan, coach of swimming at Princeton University, whose assistance and criticism was frequently sought and freely given. Mr. L. deB. Handley of New York also has a number of times gone over the rules material for swimming and water polo and has each time given valuable suggestions and encouragement. Special acknowledgment is also made to the Intercollegiate Swimming Association, the Amateur Athletic Union of the United States, and the Amateur Swimming Association of England, for rules material which frequently served as a basis for our own.

The rules for water basket ball, as printed, embody the latest development of the game in the Western Intercollegiate Conference, where it has been successfully played the past two seasons. Changes in effect for the present season are also included.

In the pursuance of its work the committee was impressed with the usefulness of an annual swimming guide which should contain the official rules for all standard intercollegiate swimming sports, a resumé of all intercollegiate dual and championship meets, records for all sections of the United States, and which might also well serve as a clearing house for the best ideas on swimming and water games. In order to make the guide most useful it should be issued soon after the opening of college in the fall. Such an early issue was impossible this year, since it was not until last September 15 that our work had been developed to the point when a guide was advisable.



LUDY LANGER,

Captain University of California Swimming Team. American champion at 440 yards, 500 yards, 880 yards and one-mile swims; world's record holder for 500 yards, and American open water record holder for 440 yards, 880 yards and one mile.

# Intercollegiate Swimming Rules

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## RULE I. OFFICIAL PROGRAM AND ORDER OF EVENTS.

The recommended official program and the order of events for intercollegiate dual or championship meets shall be as follows:

1. Relay. Four men, each to swim two lengths of pool.
2. Fancy Diving.
3. Short Dash. 50 yards for pools exceeding 60 feet in length; 40 yards for pools 60 feet or less in length.
4. Breast Stroke. Distance to be decided by leagues or team officials within the following prescribed limits; minimum distance, 40 yards; maximum distance, 200 yards.
5. 220 yards.
6. Plunge for Distance.
7. Back stroke. Minimum distance, 40 yards; maximum distance, 150 yards.
8. 100 yards.
9. Water Polo or Water Basket Ball.

Program  
and order  
of events

## RULE II. POOL.

SECTION 1. Pools for championship meets shall be at least 60 feet in length, 20 feet in width, and have a water depth of 7 feet.

Dimensions  
of pool.

*Note.*—Records made in pools of less than 60 feet in length shall not be considered as official.

### RULE III. OFFICIALS.

Number of officials.

SECTION 1. The officials shall be one referee, one clerk of course, one scorer, three judges, three timers, a starter, and an announcer.

Duties of referee.

SEC. 2. The referee shall have full jurisdiction over the meet and he shall see that all the rules are enforced. He also shall instruct the other officials as to their duties.

### RULE IV. CONTESTANTS.

Number of contestants in dual meets.

In all dual meets the number of contestants from any college for each event shall be limited to two, with the exception of the relay race, when four men shall comprise a team, and the water polo or water basket ball team.

### RULE V. SCORING OF POINTS.

SECTION 1. In all dual meets places in events shall be valued as follows:

Scoring dual meets.

a. In the relay race:

First place .....	5 points
Second place .....	0 points

In case the number of events is such that a tie score is possible, first place in the relay shall count 6 points..

b. In all other events:

First place .....	5 points
Second place .....	3 points
Third place .....	1 point

SEC. 2. In intercollegiate championships where three or more teams are entered scoring of place values shall be as follows:

**RULE V.**

## a. In relay race:

First place .....	8 points
Second place .....	6 points
Third place .....	4 points
Fourth place .....	2 points

Swimming  
championship  
meets.

## b. In all other events:

First place .....	5 points
Second place .....	3 points
Third place .....	2 points
Fourth place .....	1 point

**RULE VI. OFFICIAL START.**

SECTION 1. In all swimming races, with exception of the back stroke, each competitor shall stand with both feet on the starting line—i. e., the curb of the pool—and when the signal is given, shall plunge. Stepping back, either before or after the signal, shall not be allowed.

Position  
for start.

SEC. 2. The official starting signal for all races shall be as follows:

1. "Get on your marks."
2. "Get set."
3. "Pistol shot."

Signal  
for start.

SEC. 3. Three false starts by any contestant shall disqualify him. No substitution shall be allowed for such disqualified competitor.

False starts.

**RULE VII. FOULS.**

SECTION 1. Each competitor shall keep a straight course, parallel with the sides of the pool from the starting station to the opposite point in the finish line. Any contestant who, when out of his course, shall touch another competitor, is liable to disqualification from the event, subject to the discretion of the referee.

Competing  
course.

**RULE VII.**

Walking in shallow water.

SEC. 2. Standing upon the bottom in the shallow end of a pool during a competition is allowed only for the purpose of resting. Walking on, or jumping from, the bottom in the shallow end shall disqualify the offender.

Turning.

SEC. 3. A competitor in turning must, under penalty of disqualification, touch the end of the pool or course with one or both hands before pushing off.

Finish of race.

SEC. 4. In all swimming races contestants must, under penalty of disqualification, touch the finish line with hand clearly out of water. In the relay race, each competitor shall touch the finish mark with hand clearly out of water, before his successor shall be touched off by the judge of his course.

Lanes.

SEC. 5. In all dual meets a rope shall be stretched lengthwise down the center of the pool and fastened at least 2 inches above the surface of the water, and the two contestants from each college shall swim on the same side of the rope.

**RULE VIII. BREAST STROKE.**

Breast stroke form.

At the pistol shot the competitors shall dive and then swim on the breast. Both hands must be pushed forward and brought backward simultaneously in like manner. The body must be kept on the breast with both shoulders on a line with the surface of the water. The "frog" kick must be used—i. e., the contestant, lying on the breast, must draw the legs up by spreading out the knees, while at the same time keeping the heels together. When

Breast stroke turn.

touching at the turn or finishing a race the touch shall be made with both hands simultaneously. Any competitor introducing or using a side stroke move-

**RULE VIII.**

ment or scissors kick during the race shall be disqualified by the referee.

**RULE IX. PLUNGE FOR DISTANCE.**

SECTION 1. The maximum height for the take-off shall be 18 inches above the water level.

SEC. 2. A plunge shall be a standing dive made, head first, from a firm take-off, free from spring. The body is to be kept motionless, face downward, during the plunge.

SEC. 3. The plunge shall terminate at the expiration of 60 seconds if the competitor has not already raised his face above the surface of the water. The duration of a plunge shall be reckoned from the time the competitor's feet leave the take-off. When a contestant touches the side of pool he shall be compelled to stop and his distance taken.

SEC. 4. The distance of a plunge shall be measured along a straight line at right angles to the diving base, to a line parallel to the diving base, over the farthest point reached by any portion of the competitor's body while fulfilling the above conditions.

*Note.*—In case more than one competitor plunges the full length of the pool, the winner shall be the one with the fastest time record.

SEC. 5. In championship or dual contests each competitor shall be allowed two plunges and the farthest plunge shall win.

SEC. 6. The official timer shall notify each contestant at the expiration of 60 seconds by the report of a pistol.

**RULE X. BACK STROKE.**

The competitors shall line up in the water facing the starting mark, with both hands resting on the

Height of  
plunge take-off.

Definition  
of plunge.

Duration  
of plunge.

Measuring  
plunge.

Number of  
plunges.

Notification of  
time limit  
of plunge.

Back stroke  
start.

**RULE X.**

**Back stroke  
turn.**

end of the pool. At the sound of the pistol the competitors shall push off on their backs and continue swimming on their backs throughout the race. At each end of the pool, competitors shall touch the end of the pool with both hands before pushing off again. In making the turn, competitors shall be allowed to shift to side or breast stroke position, but shall not take a stroke in this position and must return to back stroke position before pushing off again. The referee shall disqualify any offender under this rule.

**RULE XI. FANCY DIVING.**

**Diving  
program.**

SECTION 1. Dives shall be classified as required and voluntary. The required dives are as follows: running front dive (plain or swallow); back dive; running forward jack-knife; and back jack-knife. In addition to these dives each competitor shall perform four other dives which must be selected from the following table:

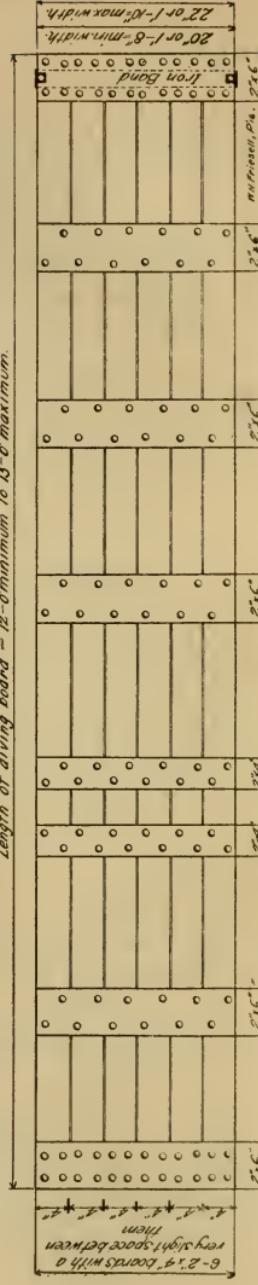
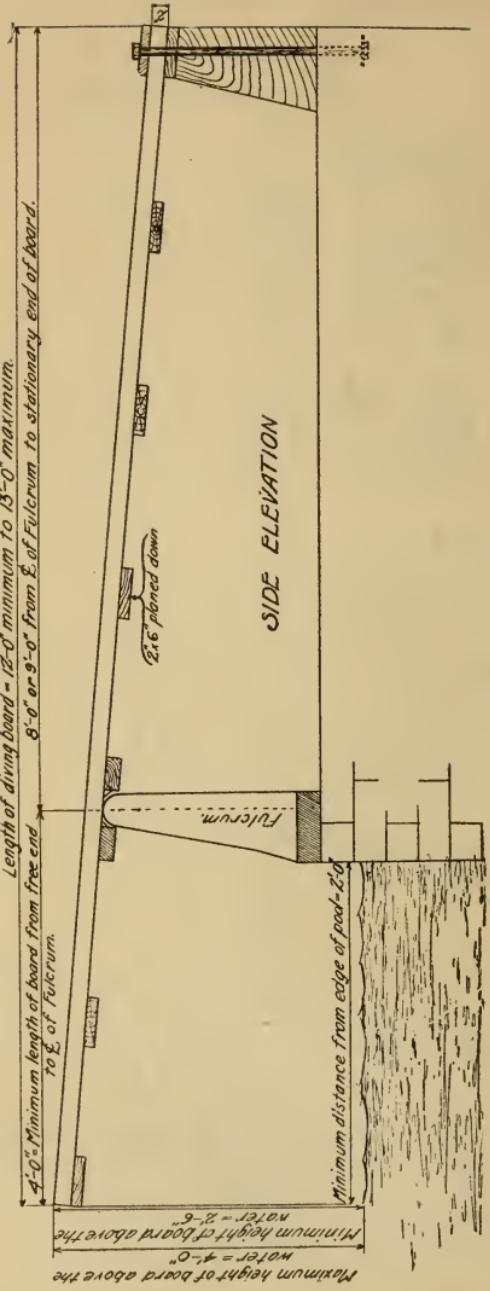
**SEC. 2. Official List of Dives.**

<b>Dive.</b>	<b>Standing.</b>	<b>Running.</b>
1. Forward somersault .....	1.5	1.5
2. Forward $1\frac{1}{2}$ somersault....	1.9	1.8
3. Forward $2\frac{1}{2}$ somersault....	2.5	2.3
4. Forward somersault with $\frac{1}{2}$ twist .....	1.6	1.6
5. Forward $1\frac{1}{2}$ somersault with $\frac{1}{2}$ twist .....	2.2	2.2
6. Forward double somersault..	2.2	1.9
7. Backward somersault .....	1.5	
8. Backward $1\frac{1}{2}$ somersault...	2.2	

**RULE XI.**

Dive.	Standing.	Running.
9. Backward double somersault.	1.9	
10. Flying Dutchman (forward spring back dive).....	1.9	2.0
11. Flying Dutchman somersault.	1.8	1.8
12. Flying Dutchman $\frac{1}{2}$ twist..	1.7	1.7
13. Twisting back $1\frac{1}{2}$ somersault.	2.1	
14. Forward spring half twist back dive .....	1.5	1.6
15. Forward spring full twist with forward dive.....	1.8	1.8
16. Backward spring and forward dive ( $\frac{1}{2}$ twist).....	1.4	
17. Backward spring and back- ward dive (full twist).	1.9	
18. Backward spring forward somersault .....	1.9	
19. Backward spring and $1\frac{1}{2}$ for- ward somersault .....	2.0	
20. Forward jack knife $\frac{1}{2}$ twist.	1.8	1.9
21. Forward jack knife with full twist .....	2.2	2.2
22. Backward jack knife $\frac{1}{2}$ twist	1.9	
23. Backward jack knife full twist .....	2.3	
24. Handstand dive .....	1.2	
25. Handstand dive with somer- sault .....	1.7	
26. Handspring dive with somer- sault .....	1.6	1.6

SEC. 3. The official diving board shall have a Official diving  
board. length of not less than 12 feet nor more than 13 feet, shall be at least 20 inches wide, and shall project not less than 2 feet beyond the edge of the pool.



## DRAWINGS AND MEASUREMENTS OF OFFICIAL DIVING BOARD AS DESCRIBED IN THE RULES.

**RULE XI.**

The height of the board from the surface of the water shall be not less than 2 feet 6 inches nor more than 4 feet. The fulcrum shall be placed at least one-third the length of the board from the free end.

*Note.*—Experience has proved the diving board of the following construction most desirable: six 2-inch x 4-inch strips of straight grained white ash, 12 or 13 feet in length, fastened together by two 2-inch x 4-inch cleats, 3 inches apart, so as to form a groove for the fulcrum at one-third the distance from the free end, and with five 2-inch x 6-inch cleats equally distributed over the remainder of the board. The board should be securely fastened to the floor with bolts at one end, there being no fastening at the fulcrum. Cocoa matting as a covering for the board has been found more satisfactory than rubber.

SEC. 4. The minimum depth of water in all college diving competitions shall be 7 feet.

SEC. 5. A piece of yarn shall be stretched across the pool 6 feet from the end of the board and at right angles to the board, resting on the curbing of the pool. The contestants when executing a jack-knife dive must enter the water inside the distance marked by the yarn. If the diver should touch the yarn but not break it the dive shall be allowed. If the diver enters the water beyond the distance marked by yarn, or breaks yarn, the dive shall be marked zero.

SEC. 6. A written list of voluntary dives shall be submitted by each competitor to the judges before the beginning of the competition. Changes in this list shall not be permitted. No competitor shall be permitted to repeat any dive.

Construction  
of board.

Depth of  
water.

Jack-knife  
limit.

Competitor's  
written list  
of dives.

## RULE XII. METHOD OF SCORING DIVES.

Number of  
fancy diving  
judges.

SECTION 1. There shall be not less than three judges, who shall, independently and without consulting each other, award points, and, if necessary, half points, up to the maximum of 10 for each dive, according to the following scale:

Diving judges'  
scale of points.

Unsuccessful attempt .....	0
Poor dive .....	3
Fair dive .....	6
Good dive .....	8
Excellent dive .....	10

Correct  
diving form.

SEC. 2. For information as to correct form in diving, judges and contestants are referred to the special article on page 20.

Scoring  
voluntary  
dives.

SEC. 3. In the case of voluntary dives, before adding up his points and placing the competitors, each judge shall multiply the points which he has awarded for each dive by the value given in the list of fancy dives, according to Rule XI, Sec. 2, and shall add the products so obtained. The maximum for each required dive shall be 10 points without addition for degree of difficulty.

Execution of  
dives alone  
considered.

SEC. 4. When judging voluntary dives, on no account shall the maximum for any particular dive be raised, or shall the judge take into consideration the difficulty of the dive done, but points shall be awarded for execution alone. An unsuccessful attempt is one in which the competitor has failed to perform the dive nominated.

Unsuccessful  
dives.

SEC. 5. At the finish of the contest, each judge shall add up his points and place the competitors, 1, 2, 3, etc., in the order thus established. Should two or more competitors receive equal points from any judge, they shall each be awarded the same placing figures, but the next competitors in order

Determining  
winners of  
diving.

**RULE XII.**

must be placed in the positions which they otherwise would have obtained.

SEC. 6. The placing figures of each judge shall be added together, and the competitor whose aggregate is the *lowest* shall be the winner. In the event of a tie for any position, the total points of the three judges shall be added together, and such position awarded to the competitor having the *highest* number.

Tie scores in  
diving.

# Instructions to Divers and Judges of Fancy Diving\*

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All dives, running or standing, plain or fancy, should be executed with the utmost possible energy. Endeavor to get as high in the air as possible.

**General instructions for all dives.** Always stand momentarily at attention before taking off or commencing to run.

A dive is considered to be finished as soon as the whole of the body has disappeared beneath the water. No points are given for return to the surface.

**Faults to be avoided.** Faults to be avoided in dives, running or standing, are as follows: falling outwards when taking off instead of springing outwards and upwards, ducking the head or throwing it too far back, and unnatural rigidity of the body which renders the dive stiff and awkward; hesitation; legs apart; feet flat; fingers spread instead of being together; legs throwing over on entering the water; hands apart in the case of a swallow dive; too much hollow to the back; fingers clenched, and arms too far back in the swallow.

**Correct form and take-off for running dives.** In all running dives take a run the full length of the board, but always stand at attention momentarily before commencing. The run must be strong, quick, and natural, and the spring should be taken from both feet; avoid leaning forward, or the legs will be thrown up too far, but try to take the spring with the body vertical. Throw the arms into position simultaneously with the spring.

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\*This article has been prepared for the Committee by Mr. Frank J. Sullivan. The material used in the compilation is taken, in part, from the 1915 handbook on swimming issued by the Amateur Swimming Association of England.

In all standing dives take a position at the end of the board, heels touching, abdomen well in, chest out, head erect—not stretched nor strained—arms held straight at the sides, with fingers loosely clenched and thumbs to the front; the whole position should be easy and graceful. Before taking off, the arms may be raised momentarily in front of, and at right angles to, the body, fingers stretched, forefingers touching and palms downward.

Correct position on board in standing dives.

After turns, somersaults, twists, or jack-knives are completed, the whole body in its passage through the air should form an easy straight line, the head neither ducked nor thrown back, but just in an erect position in relation to the body, the thighs and back well braced, knees straight, toes pointed, and a slight natural hollow to the back. This position must be maintained until the dive is completed by the toes disappearing below the water.

Correct position of body while in the air.

In the plain front dive simultaneously with the spring, the arms should be swung into position either above the head with forefingers touching and palms downward, or at right angles laterally to the body as in the so-called swallow dive.

Plain front dive.

In the swallow dive the arms must be brought into position above the head just before entering the water. The entry into the water should be at an angle of about 50 or 60 degrees, and with as little splash as possible. Judges, when judging this part of the dive, should carefully note whether the splash is caused by the body entering the water at an incorrect angle, by the legs throwing over, by the feet being flat, or by the build of the performer. It stands to reason that a heavily built person will make more splash than one of slighter build, therefore the entry into the water must be judged, not by the amount of splash made, but by the angle of entry and correctness of position.

Swallow dive.

**Back dive.** Assume position of attention on low end of the board; walk full length of board in graceful manner; stand on balls of the feet on the extreme edge of the free end of the board with back towards the water, arms extended at sides or hands placed on hips; spring upward and slightly backward, keeping the hands in either of these positions until the body has reached its highest point in the air, at which time the hands must be fully extended beyond the head before entering the water.

**Front jack-knife dive.** Running or standing, spring from the board as high as possible. At top of spring, bend forward at the hips and touch the toes, which must be pointed. Maintain this position until the last possible moment, straighten out and enter the water head first with arms above the head. The entry into the water must be made within 6 feet from the end of the board.

**Back jack-knife dive.** Stand on the balls of the feet on the extreme edge of the board, back to water, obtain a good balance (the arms may be stretched in front of the body before taking off), avoid leaning forward, take a strong backward spring upwards and outwards, bending at the hips at the same time until the fingers touch the toes. This position is maintained and entry into the water made as in the front jack-knife dive.

**Hand balance dive.** In all hand balance dives, the balance must be held for an appreciable time.

**Somersault dives.** In the front or back dives with more than one somersault, the somersault movements may be executed with the body in either of the following positions:

(a) Tucking the body as far as possible into the shape of a ball by drawing knees well up in front,

and bending head and shoulders forward as far as possible, with hands gripping the legs below the knees. Straighten the body smartly before entering the water.

(b) Bending at hips as in jack-knife dive.

In all front or back single somersaults the movement is made with body in "layout" position—i. e., keeping the body erect with arms fully extended sidewise on a line with the shoulders.

In all somersaults and in jack-knife dives with twists, the somersaults or jack-knife must be completed before twisting.

When entering the water feet first, the body should be vertical, back slightly hollowed, legs straight, toes pointed, head drawn back, arms extended at the sides.

The position of the head is of great importance in plain and fancy diving. In a plain dive, if the head be ducked, there is a tendency to throw the legs over, and if held too far back, a tendency to come flat. In fancy dives, the position of the head goes a long way towards regulating the movement of the body.

Dives with  
twists.

Feet first  
dives.

Position of  
the head  
important.

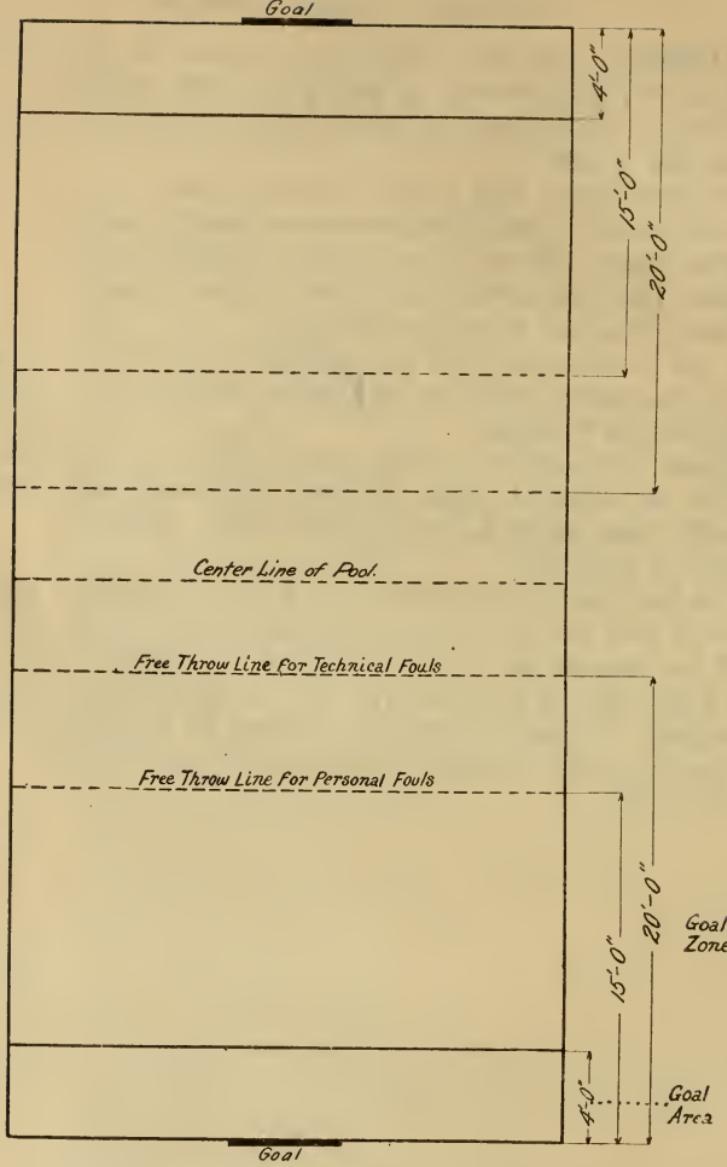


DIAGRAM OF WATER POLO FIELD OF PLAY.

## Intercollegiate Water Polo Rules

Copyright, 1915, by the National Collegiate Athletic Association and the American Sports Publishing Company.

### RULE I. PLAYING AREA.

SECTION 1. The length of the playing area shall Size of pool. not be greater than 75 feet nor less than 60 feet. The width of the playing area shall not be greater than 40 feet nor less than 20 feet. All pools shall conform as nearly as possible to these dimensions.

*Note.*—When pools have a *shallow end* it is advisable to *shorten* the playing area by placing a *spar with goal attached* across the pool so as to insure a playing area 6 feet deep.

SEC. 2. The following lines on each side of the Lines. playing area shall be plainly marked:

1. Center line—equidistant from ends.
2. Four-foot lines—4 feet from ends.
3. Fifteen-foot lines—15 feet from ends.
4. Twenty-foot lines—20 feet from ends.

SEC. 3. The two 20-foot areas at the ends of the Zones. pool shall be called the *goal zones*.

### RULE II. THE GOALS.

SECTION 1. The goals shall be boards 4 feet in Size of goal. length and 18 inches in height and marked in large letters with the word *goal*.

SEC. 2. They shall be located at the ends of the Location. playing area 12 inches above the water level and equidistant from the sides.

### RULE III. THE BALL.

SECTION 1. The ball shall be the regulation white Size of ball. rubber *water polo ball*, not less than 7 nor more than 8 inches in diameter.

**RULE III.**

**Inflation.** SEC. 2. It should be inflated *seven-eighths full* and free from oil, grease or other objectionable substance so that a good grip may be had on it with one hand, and it shall be inspected by the referee before putting it into play to see that the inflation is as described.

SEC. 3. The home team shall supply an official ball.

**RULE IV. PLAYERS AND SUBSTITUTES.**

**Positions.** SECTION 1. The team shall consist of six players in the following positions: Center, Right Forward, Left Forward, Right Back, Left Back, and Goal Keeper.

**Captains.** SEC. 2. The captains must be *playing* members of their teams. All protests, all demands for cessation of play for any purpose whatsoever, and notices of substitution of players must be made to the referee by the *captains*.

**Substitution of players.** SEC. 3. A player may be substituted for another at any time *provided that his side has possession of the ball*, or at any time at the discretion of the referee except as stated in Rule VIII, Sec. 4. Before entering the water the new player must report to, and be recognized by, the referee.

**Number of substitutions.** SEC. 4. Only *two* men may be substituted in any one championship game unless it is otherwise agreed by both captains before the *start* of the game. A player who has been removed during the game for other reasons than disqualification may be returned during the subsequent period.

**RULE V. OFFICIALS.**

**Number of officials.** SECTION 1. There shall be the following officials:

**RULE V.**

Referee.

One Timekeeper.

Two Goal Umpires.

SEC. 2. The referee must be selected and mutually agreed upon by the official representatives of both teams. He shall be supplied with a whistle and pistol for signaling. Selection of referee.

*Note.*—It is advisable for each league to have an approved list of officials from which to choose.

SEC. 3. The *umpires* shall call attention to any fouls, shall give evidence on the scoring of goals if called upon and shall keep time on the ball when in play in the *goal zones*, but may not himself stop the game. Umpires.

SEC. 4. The timekeeper shall be chosen by mutual agreement of the two captains. He shall be supplied with a stop watch and whistle and shall keep time on the game. Timekeeper.

SEC. 5. The referee shall have absolute supervision of the game, shall have the power to reverse any decision of an *umpire*, and shall call fouls when necessary. Duties of referee.

SEC. 6. In case of a foul the referee shall indicate the offender and announce the *nature* of the foul, so that the scorer, offender, and spectators can hear him. Referee announces fouls.

**RULE VI. THE GAME.**

SECTION 1. The game shall consist of two periods, or halves, of 8 minutes each, with an intermission of 5 minutes. Length of game.

SEC. 2. In the case of a tie at the end of the second period, the teams shall rest 5 minutes and then play for another period of *three* minutes. This is to be continued until at the end of any period one team is ahead. Extra periods.

**RULE VI.**

Time out,

SEC. 3. A captain, *provided his team is in possession of the ball*, may call time out without penalty up to 2 minutes for any purpose, but not more than twice in one period. On *resumption* of play the teams shall take positions *back* of their own 20-foot lines and the ball shall be given to the *goalkeeper* of the team having possession of it when time was called. Time occupied by disputes, repairing of suits, replacing of men, lining up for new start, and free throws from fouls, shall *not* be counted as time of play.

Referee  
stopping  
game.

SEC. 4. When for any reason the referee wishes to call time or stop play during any period, he shall sound the whistle or pistol. This signal shall immediately render the ball *dead* and the ball so stopped shall not again be put into play except by the referee, who shall give it to the goalkeeper of the team having it last, both teams being *in* the water *within* their *own* 20-foot line when the play is resumed.

Ball out  
of bounds.

SEC. 5. Time shall be taken out whenever the ball goes out of bounds, time out to begin when the referee's whistle or pistol sounds calling the ball out of bounds and time in again shall begin when the referee's whistle or pistol sounds calling the ball in play.

Start of  
game.

SEC. 6. The start at the beginning of each period shall be made by both teams lining up at their respective ends of the pool, *the visitors being given choice* at beginning of first period. The ball shall be placed in the center of the playing area by the referee and held there with a pole fitted with a ring, start for the ball being made only at the sound of the whistle or pistol. In case of a *false* start, teams shall line up as before. *Three consecutive false starts* by one of the teams shall constitute a *technical*

**RULE VI.**

foul. Teams shall change ends at half time and at the beginning of each extra period.

**RULE VII. DEFINITION OF TERMS.**

SECTION 1. The ball shall be considered in play until it either leaves the playing area or the referee signals with whistle or pistol.

SEC. 2. To score a *touch goal* the ball must be touched to the goal while in the possession of a player on the attacking side. To score a *thrown goal*, the ball must strike the goal board after being thrown by a member of the attacking team from *outside* the 15-foot line.

SEC. 3. After a touch goal or a thrown goal has been scored or after a free throw, the teams shall line up at their respective ends of the playing area and the ball shall be given to the *goalkeeper* of the side *scored upon*. (*Exception* :—After a free throw, whether successful or not, the ball shall be given to the goalkeeper of the team fouled against.) At the signal by whistle of the referee all the men of both teams must enter the water *immediately* from their respective ends of the pool *under penalty* of a *technical foul* and in 10 *seconds* the goalkeeper holding the ball must pass or carry it out of his goal zone. When the ball is in a team's own zone a player on that team may retain possession of it not longer than 10 *seconds* or until the umpire or referee signals by word, at which signal the ball must pass out of that goal zone or be forfeited to the goalkeeper of the opposing team.

SEC. 4. If a team causes the ball to go out of the playing area, it shall be given to the goalkeeper of the opposing team within his own *four-foot line*; and the players of the team causing the ball to go

Ball in play.

Method of making goals.

Putting ball in play after score or free throw.

Putting ball in play after being thrown out of pool.

**RULE VII.**

out shall *not* be allowed within the *fifteen-foot line* until the whistle or pistol is sounded. No player shall leave the water when the ball goes out of bounds.

Carrying the  
ball under  
water.

SEC. 5. The ball shall be kept *on or as near the surface* as possible and shall not be *intentionally* carried under water. If, however, a player with the ball has been forced under by an opponent, he may carry the ball as far as eight feet under water. The ball shall not be carried under water a greater distance than this under any circumstances. No goal shall be counted if scored on an *under water pass*.

Resting.

No player shall hold on to the side or end of the pool except for the purpose of resting and shall take *no part in the play* while resting.

Playing within  
four-foot line.

SEC. 6. No player except two backs of the *defending* side shall be allowed inside the 4-foot line until the *ball* is within it. When the ball is *within* this line no player *inside* this section will be allowed *artificial support* other than the *bottom* of the playing area.

Tackling.

SEC. 7. No player shall tackle an opponent unless said opponent *has possession of the ball* or is *within four feet* of the ball. At other times a player in covering an opponent may block him, but shall *not* lay hands on him.

**RULE VIII. FOULS.**

SECTION 1. Fouls are divided into three groups: personal, technical, and disqualifying.

Penalty for  
personal fouls.

SEC. 2. The penalty for a personal foul shall be a free throw at an *unguarded* goal from the *fifteen-foot mark*, which if successful will count *two points*. Personal fouls are enumerated as follows:

**RULE VIII.**

- a. Tackling player who is not within 4 feet of ball.
- b. Delaying the game after receiving notification to play by the referee.
- c. Kicking intentionally or striking an opponent.
- d. Holding under water for more than *ten seconds* any player who is within 4 feet of the ball. (*Exception*—A player who has *possession of the ball* may be held under 10 seconds or as long thereafter as he retains possession of the ball.)
- e. Unnecessary rough work.
- f. Tackling player after goal has been scored or after game has been stopped for any reason by referee.
- g. Use of abusive language to players or officials.
- h. Player other than captain questioning any decision of officials.

SEC. 3. The penalty for a technical foul shall be a free throw at an *unguarded* goal from the *twenty-foot mark*, which if successful will count *one* point.

Penalty for  
technical  
fouls.

Technical fouls are as follows:

- a. Crossing 4-foot line ahead of ball. (If player corrects this mistake at once, provided the mistake has in no way affected the play, no foul shall be called.)
- b. Holding on side or end of pool while engaged in scrimmage or while in *possession* of the ball.
- c. Tackling a player by the costume.
- d. Substitute failing to report to referee.
- e. Swimming more than *eight feet* under water with the ball.
- f. Three false starts on line up.
- g. Three players *inside* their own 4-foot line when ball is *not* in goal section. (*Exception*—If the *defending* side fouls after the ball is *within* 4-foot line and a goal is *scored* the foul shall *not* count. If, however, the goal is *not* scored, the foul

**RULE VIII.**

*shall count and a free throw given to the offended side.*

h. Failure to enter water according to Rule 7, Sec. 3.

i. Holding ball under water unless *tackled by opponent*.

j. Violation of Rule 7, Sec. 6, regarding artificial support.

**Suspended player.** SEC. 4. A player may be suspended for the period or *disqualified* for the game by the referee for *unnecessary roughness* or for *unbecoming conduct* and his team charged with a *personal foul*. No *substitute shall be allowed for a suspended player*, but he may return to the game at the beginning of subsequent period. When a player is disqualified a substitute *may take his place at start of subsequent period*.

SEC. 5. Any player having oil, grease, or other objectionable substance on his *body or suit* shall be *disqualified*.

**Foul by attacking side while scoring goal.** SEC. 6. If the attacking side fouls and before the foul is called a goal is scored by them, the loss of the goal shall be the only penalty, and the ball shall be put in play in the center of the pool as at the beginning of the game.

SEC. 7. During a free throw no player shall be allowed in the water excepting the player making the free throw.

**RULE IX. SCORING.**

1. A touch goal will equal 5 points.

2. A thrown goal will equal 3 points.

3. A goal thrown by free throw after personal foul will equal 2 points.

4. A goal thrown by free throw after technical foul will equal 1 point.

# Intercollegiate Water Basket Ball Rules

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## RULE I. PLAYING AREA.

SECTION 1. Water basket ball may be played in Pool, any pool free from obstruction, not exceeding 2,500 square feet in area.

SEC. 2. (a) A line shall be drawn across the bottom of the pool or on the sides of the pool at an equal distance from each end.

(b) Marks or lines shall be drawn across the bottom and up the sides 15 feet from the ends, called "15-foot lines." Marks, lines,  
etc.

## RULE II. THE BALL.

The regulation ball shall be a leather covered Water Polo ball and shall be fully inflated.

## RULE III. BASKETS.

SECTION 1. The baskets shall be hammock nets of cord, suspended from metal rings 18 inches in diameter. The rings shall be  $5\frac{1}{2}$  feet above the water in the center of the ends of the pool. The inside rims shall extend 6 inches from a rigid supporting surface.

SEC. 2. The background shall measure at least 6 feet horizontally and 4 feet vertically, and shall extend not less than 3 feet above the top of the basket. It must be solid and rigid. Background.

## RULE IV. TEAMS.

SECTION 1. Teams for match games shall consist of six players.

**RULE IV.**

SEC. 2. There shall be three forwards and three backs.

Substitutes. SEC. 3. A substitute may take the place of another player when ball is not in play, or when the team having the ball wishes to put in another player.

SEC. 4. The player must report to referee before entering the game.

**RULE V. OFFICIALS.**

SECTION 1. The officials shall consist of a referee, a timer, and scorer.

SEC. 2. The referee shall have entire charge of the game, deciding fouls, goals, and free throws. His decision shall be final.

SEC. 3. The referee shall blow a whistle whenever necessary to call time out or a foul.

SEC. 4. In case of a foul, he shall indicate the offender and announce the nature of the foul, so that the scorer, offender, and spectators can hear him.

SEC. 5. The referee shall not blow his whistle for time out unless a suit is torn off or other serious accident occurs, or unless the captain of the team in possession of the ball calls time out. The ball shall then be put in play where it was when time was called out. Play must be resumed within two minutes.

**RULE VI. CAPTAINS.**

The captains shall be playing members of the team and shall toss for choice of goal at start of play. The goals shall be changed at half-time. In case of a tie the captains shall toss for choice of goal as at beginning of game. A captain can call time only when his team is in possession of the ball, to introduce a new player, or to repair a suit. Any

**RULE VI.**

player questioning the decision of the referee, except the captain, may have a foul called on him at the discretion of the referee.

**RULE VII. PLAYERS.**

SECTION 1. No player shall tackle another unless said player is in possession (actual possession) of the ball, and then only one of the opposing players shall be allowed to tackle him. Dribbling is considered "in possession of the ball." Tackling.

SEC. 2. A player, in covering an opponent, may block him, but he shall not be allowed to lay his hands on him or hold him with his legs. Blocking,  
Holding.

SEC. 3. No player shall be allowed to hold on to the sides of the tank except for the purpose of resting, and he shall take no part in the game while so doing. Resting.

**RULE VIII. LENGTH OF GAME.**

SECTION 1. The game shall consist of 16 minutes of actual playing time, divided into halves of 8 minutes each, with a 5-minute rest between halves.

SEC. 2. Time occupied by free tries, disputes, repairing suits, replacing men, and lining up for a new start shall not be counted as time of play.

SEC. 3. In the case of a tie at the end of the Tie. second period, the teams shall rest five minutes, and then play another period of three minutes. The team being ahead at the end of the extra period shall be declared the winner. In case neither team scores in the first extra period of play, or the score is still tied, then the teams shall change ends and play another period of three minutes. The team being ahead at the end of the second extra period shall be declared the winner. If the score is a tie at the end of the second extra period the game shall be declared a tie game.

## RULE IX. START OF GAME.

SECTION 1. The start shall be made by each team lining up at its respective end. The referee shall then blow the whistle and throw the ball into the center of the tank. The forwards only shall be allowed to go after the ball, starting as the referee blows his whistle. The backs must get into the water at the sound of the whistle.

False start. SEC. 2. In case of a false start the teams shall line up as before. Three false starts shall constitute a foul; penalty, free throw.

## RULE X. BALL IN PLAY.

The ball shall be kept on or as near the surface as possible and shall never be intentionally carried under water. The ball shall never be advanced under water, either while held in the hand or between the legs, except when a player is pushed under he may swim out if pushed under by an opponent. No basket shall be allowed when made by an under-water pass.

## RULE XI. BALL OUT OF BOUNDS.

When the ball goes out of the pool it shall be returned to the place from which it was thrown or batted and given to the opposing team. The player receiving the ball from out of bounds shall not be permitted to try for goal, but must pass the ball to one of his team-mates. He shall have 5 seconds in which to throw the ball. If he fails to throw in 5 seconds, the ball shall go to the opposing side.

## RULE XII. LINING UP.

After each goal and after each free throw has been made, the teams shall line up at their respective ends.

### RULE XIII. FREE THROW.

SECTION 1. A free throw shall be thrown from the 15-foot line. An honest attempt must be made to throw the ball into the basket. The forwards of the team given possession of the ball on a foul may line up as they choose and one of their number try for goal. The backs of the opposing team may cover all the opposing players except player making free throw, who shall not be interfered with in any way.

SEC. 2. If basket is made, both teams shall line up at their respective ends.

SEC. 3. If basket is not made, the ball is again in play, and backs and forwards may go after it.

### RULE XIV. SCORING.

SECTION 1. Two points may be scored by making a field basket. One point may be scored by a free throw.

SEC. 2. If, when trying to score a free throw, the ball goes out of the pool, it shall be taken to one of the opposing backs and he shall be allowed to pass it to one of his forwards. The referee shall count five, and if the ball is not thrown in that time it shall go to the opposing side on the 15-foot line.

### RULE XV. FOULS.

SECTION 1. A foul is the breaking of any rule.

SEC. 2. It shall be a foul to tackle an opponent who does not have actual possession of the ball. It shall be a foul to tackle an opponent by his costume, to kick or strike. It shall be a foul to hang on to the side of the pool when in possession of the ball. It shall be a foul to interfere with a player who is trying for a free throw (no splashing shall be allowed during free throws). It shall be a foul to hold an

**RULE XV.**

opponent under water after he has let go of the ball, at the discretion of the referee.

SEC. 3. Four personal fouls shall be sufficient cause for the removal of a player from the game.

SEC. 4. Personal fouls consist in kicking, striking, or tackling, opponent not in possession of ball, or any unnecessary rough playing.

SEC. 5. No player shall be permitted to interfere with the ball while it is passing through the goal ring or net. The referee shall have power to award a goal if such an offense is attempted.

*Note.*—In case the ball lodges between the rings and the background, the ball shall be thrown up between two players of opposing sides, as near as possible to the point where the ball lodged.

**RULE XVI. TO STOP PLAY.**

When for any reason the referee wishes to call time or stop play during the game, a pistol shall be fired. This signal shall immediately render the ball dead and the ball, when stopped, shall not be put in play again except by the referee.

**RULE XVII. END OF PLAY.**

SECTION 1. If, at the end of first or second half, the ball should be thrown and is in the air when the timer's pistol is fired, the goal being made shall not count in the score.

SEC. 2. If a foul has been called just as timer's pistol is fired, the free throw shall be allowed.

**RULE XVIII. SWIM UNDER WATER.**

Players shall be permitted to push off from end or side of pool and swim under water when not carrying the ball, thus affording ample opportunity for trick plays.

## Historical Sketch Intercollegiate Swimming Association

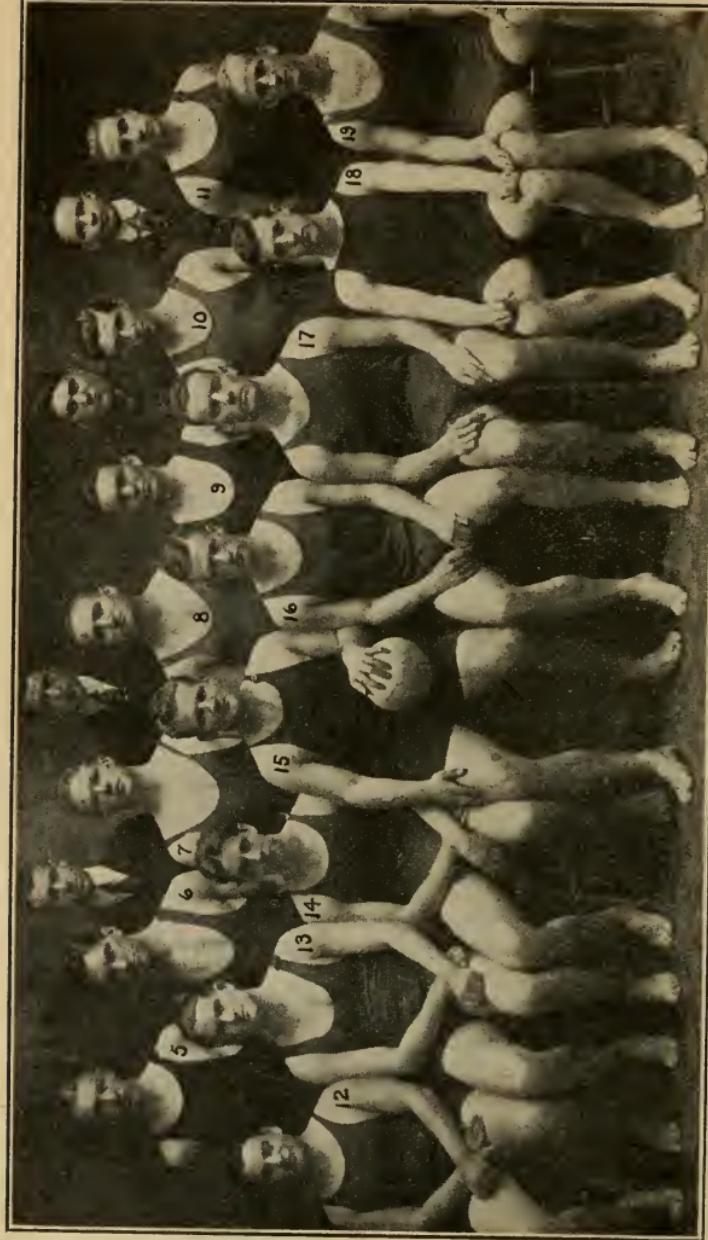
*By George Kistler, Coach of Swimming University of Pennsylvania; First College Swimming Instructor in America.*

The first swimming and dual meets were started in the year 1897, when I was engaged as swimming instructor at the Houston Club, University of Pennsylvania. This may be looked upon as the actual start of the colleges in aquatics. The autumn of 1899 saw Yale and Columbia follow Pennsylvania's lead and organize squads. All three met at the Sportsmen's Show in swimming and water polo, Pennsylvania winning both events, thus justly claiming the first intercollegiate laurels awarded in aquatics.

This success stirred Harvard to enter the meets in 1902. About the same time the Missouri Athletic Association boomed forth with a bunch of swimmers, rivaling the collegians in starting things moving in the swimming line. Cornell took up the sport in 1903. In the same year Wisconsin University got going in the West, then came Princeton in the spring of 1904, closely followed by Brown, Washington University, in St. Louis, and the University of Chicago. It seemed desirable at this time to organize an intercollegiate swimming association, and Pennsylvania, Columbia and Princeton combined in a triangular league at the end of 1905 and 1906. The first officers of the association were: George C. Kramer of Columbia, president; E. Hopkins of Pennsylvania, and K. W. Willis of Princeton. This league did not last longer than a year or two. Later Yale, Harvard and Brown wished to enter and proposed forming a new league, which was done, and the six started all over again. The College of the City of New York had by this time taken up the swimming game, and in 1908 also entered the league.

At the spring meeting of the league the season's schedule was formed and it was decided to hold dual meets for the championship both in swimming and water polo by means of a round robin tournament, the college winning the most meets to be the intercollegiate champions, and at the end of the season, to have a special meet in which all colleges competed to see who would win the individual championship honors.

The events selected by the league are as follows:



1, Edinger, Mgr.; 2, Kennedy, Coach; 3, Levie (S); 4, Allison, Asst. Mgr.; 5, Cochran (S); 6, Gibson (WP); 7, Van De Water (WP); 8, Levinson (WP); 9, Noble (WP); 10, Hirshfield (WP); 11, Burghard (S); 12, Cooper (WP); 13, Walker (S); 14, Vollmer (S); 15, Moquin (WP), Capt.; 16, Cooper (S), Capt.; 17, Lee (S); 18, Davidow (S); 19, Rogers (S).

COLUMBIA VARSITY SWIMMING AND WATER POLO TEAMS, 1914-15.  
Tied for Swimming Championship of Intercollegiate Swimming Association.

Pach Bros., Photo.

Relay race.

Fancy diving.

Fifty yards swim.

Two hundred and twenty yards swim.

Plunge for distance.

One hundred yards swim.

Teams of four from each college to swim two lengths of pool; sometimes this was 600 feet, other times 800 feet, according to size of pool where meet was held.

This program has continued since the beginning of the association, excepting that at the last individual championships, held at Yale, a breast stroke and a back stroke of fifty yards each were added to the program.

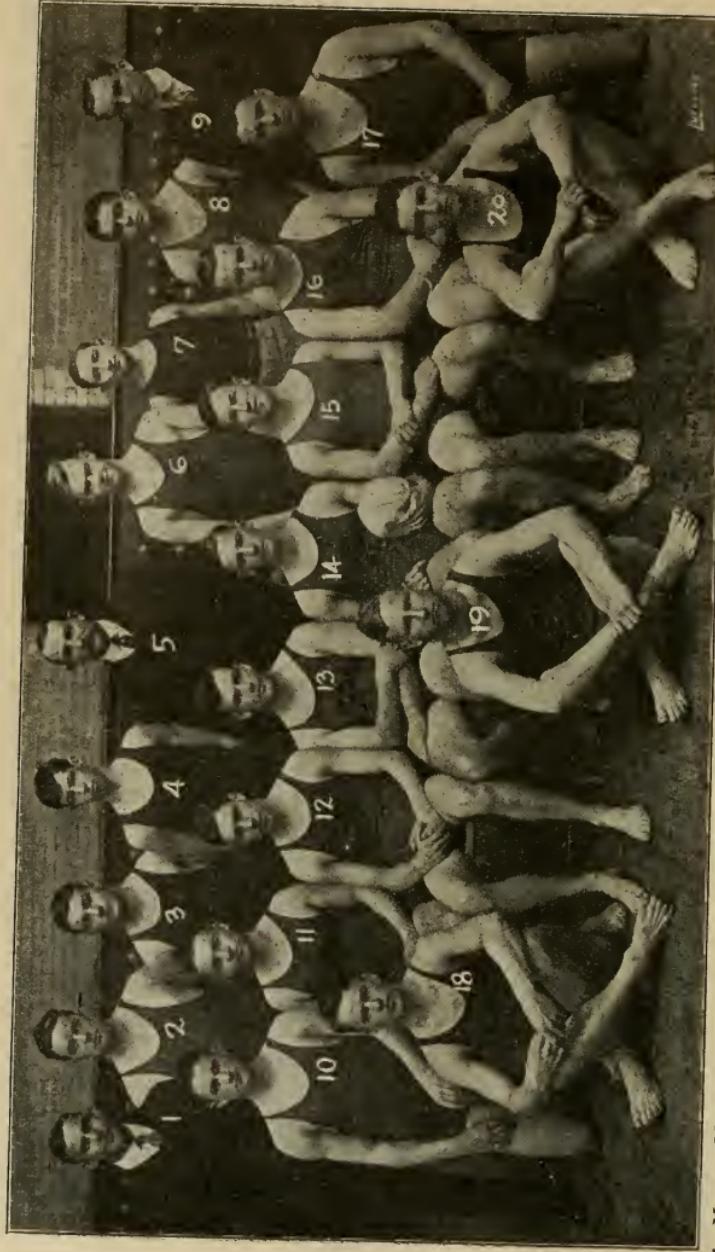
The University of Pennsylvania enjoys the distinction of being the first American university to place a swimming pool at the disposal of its students and to take up swimming as a regular intercollegiate sport. This was made possible in 1897 when I first entered the Houston Club of the University of Pennsylvania as an instructor in swimming, having previously won the one mile professional championship of the world in England, September 4, 1887.

I organized swimming and water polo teams at Penn, and then made the sport an intercollegiate one by inducing other universities to organize teams and hold dual meets in the Houston Club tank.

In the absence of an intercollegiate association these meets were uniformly regarded as settling the intercollegiate championships each year. Pennsylvania was usually successful in carrying off the premier honors.

Between 1898 and 1904 Pennsylvania won innumerable swimming honors. In 1898 the team made almost a clean sweep of the events at the Sportsman's Show in Boston, taking fifteen prizes, also the water polo game. In March, 1899, at the same event in New York the team did even better, E. Carroll Schaeffer taking thirteen prizes himself. During this year and the next two, Schaeffer developed into the foremost swimmer of America, holding at one time every American record from twenty yards to one mile. Among other Pennsylvania swimmers who have held American championships are Dr. A. T. Kenny, Paul Newman, W. G. Douglass, D. B. Renear and several others.

Although strictly speaking, there was no such thing as an intercollegiate championship prior to 1905, Pennsylvania carried off the honors at all the invitation meets in Houston Club with one exception, when the honor went to Yale.



1, Marcy, Mgr.; 2, Lehman; 3, Tredwell; 4, Bierenbaum; 5, Kistler, Coach; 6, Russell; 7, Coons; 8, Ratner; 9, Osgood, Asst. Mgr.; 10, Simonton; 11, Masten; 12, Hughes; 13, Shryock, Capt. of Swimming; 14, Schrenk, Capt. of Water Polo; 15, Given; 16, Swan; 17, Walsh; 18, Coons; 19, Keiser; 20, Leopold.

UNIVERSITY OF PENNSYLVANIA SWIMMING AND WATER POLO TEAMS.  
Tied for Swimming Championship of Intercollegiate Swimming Association.

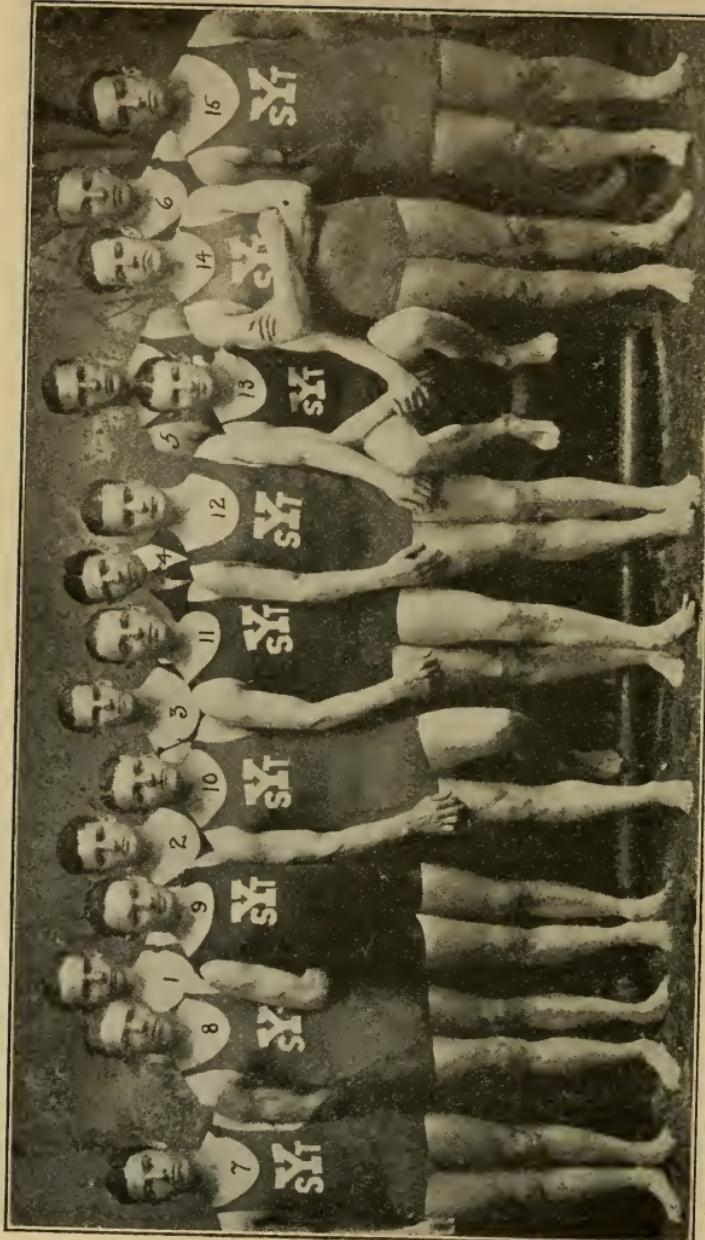
On March 17, 1905, Pennsylvania held an invitation meet in the new gymnasium pool at which nearly all the big universities in the East competed. The championship was won by Pennsylvania, with Columbia second, Yale third, Princeton not participating. This meeting resulted in the formation of an intercollegiate swimming association with officers, and the first championship was held at the gymnasium pool, in March, 1906.

The championship in this meet was won by Pennsylvania, with Columbia second and Harvard third. In 1907 the association decided on a new method of awarding the championship. Each college was obliged to meet each other in dual competition and then the championship was determined on a percentage basis. In this year Princeton won the honor. The year following, however, Pennsylvania regained the title. Owing to the necessity of forfeiting her meet to Harvard, and Pennsylvania being tied with Princeton at the end of the season, a second meet was ordered in New York, which Pennsylvania won by the score of 40 to 13, which gave her the title.

In relay swimming races Pennsylvania has been uniformly successful. Relay teams at first consisted of five men representing each college. In 1905 when the relay race was made a part of the intercollegiate program, Pennsylvania won the championship by defeating Yale and Columbia. The year following she lost to Columbia. In 1907 Penn won from Yale, Columbia, Brown, C. C. N. Y., Chicago, Missouri and Illinois, losing only to Princeton. All of these victories were repeated in 1908, thus losing the Eastern championship but winning the title of the West. In 1908-09 Pennsylvania won the intercollegiate championship of America, but in 1910-11 Yale wrested these honors from her. In 1913-1914 the season was marred by a number of mishaps, the meets ending in Pennsylvania getting third place, losing to Yale and Princeton and winning from Columbia and C. C. N. Y.

In 1911-12 Pennsylvania again captured the swimming championship of the Intercollegiate Swimming Association, and in the next two years Yale was first, with Princeton a close second. Last year the teams were so evenly matched that the I. S. A. race resulted twice in a triple tie between Columbia, Pennsylvania and Yale.

In water polo Princeton has achieved the remarkable record of winning the championship successively for the last four years, with Yale a close second every year.



1, Alexander; 2, Landstreet; 3, Brereton; 4, Mayer, Mgr.; 5, Smith; 6, McLeish; 7, Benjamin; 8, Schlaet; 9, Marr; 10, Gould; 11, Summers, Capt.; 12, Hoadley; 13, McAleean; 14, Ferguson; 15, Rosener.

YALE UNIVERSITY SWIMMING TEAM.

Tied for Swimming Championship of Intercollegiate Swimming Association.

## Review of the Intercollegiate Swimming Association Season, 1914-15

*By L. de B. Handley, New York Athletic Club.*

Keen competition is the fuel upon which feeds the fire of athletic enthusiasm. Close rivalry in sport arouses the fighting spirit of its devotees, the innate love of contest of the public.

The intercollegiate swimming season of 1914-15 furnished competition so keen that after the early meets interest was raised to white heat and held there to the end.

The teams of Yale, Pennsylvania and Columbia battled to a dead heat in the championship tournament of the league, then arranged a post-season series to try to settle the question of supremacy, but in this series Yale beat Columbia, Pennsylvania defeated Yale, and Columbia triumphed over Pennsylvania, so another tie was reached, and never decided, for the time lacked to run off a third tournament. It is seldom, indeed, that an inter-collegiate athletic pennant cannot be awarded because of the equal strength of three of the contending teams.

Princeton finished fourth and College of the City of New York fifth; in the title contests, but it is only fair to state that the Tigers would have been hard in the running had not sickness and injury deprived the squad of several of its best performers.

Herbert Vollmer of Columbia proved the bright individual star of the year. He won both the 100 and 220-yard swimming championships and twice bettered the Century League record, covering the distance first in 58 1/5 seconds, on February 13, then in 58 seconds flat, on April 17. The old standard had stood to the credit of John Shryock, of Pennsylvania, at 58 3/5 seconds, since February, 1912.

James Shryock, the Pennsylvania captain, was the second best all round swimmer. He gave Vollmer several close calls and captured three seconds, at 50, 100 and 220 yards, in the inter-collegiate events.

Premier honors at 50 yards were garnered by Hoadley of Yale. He set a new record of 25 1/5 seconds on December 11, displacing the former one of 25 4/5 seconds established by Paul Roberts, also of Yale, on March 6, 1914, and he took title in the individual championship meet.

Arthur McAleenan, another Yale student, was the leading fancy



1—Herbert Vollmer, Columbia University and New York Athletic Club. 2—Arthur McAleenan, Yale University and New York Athletic Club, fancy diving champion. 3—C. G. Lehman, University of Pennsylvania, plunger. 4—Selton E. Hoadley, Yale.

**ALL-STAR SWIMMING TEAM, INTERCOLLEGIATE SWIMMING  
ASSOCIATION.**

diver. He went through the season without a defeat and in the final test he successfully defended the championship he had appropriated in 1914. It may be added, however, that his rivals showed vast improvement over the previous year and pressed him closely. In the intercollegiate event he only won from Friessell of Princeton by the narrow margin of one and a fraction points in 105.

Laurels in plunging for distance were divided between Orlando Schoemaker and Carl Lehman of Pennsylvania and Trueman Smith of Yale. Schoemaker secured the championship with a plunge of 69 feet 8 inches, but the other two made better performances during the season, Lehman covering 74 feet 10 inches and Smith 72 feet 11 inches, at the Yale-Pennsylvania meet of April 17.

Yale turned out the fastest relay team. It came within one-fifth of the 200-yard record and was victorious in all but one race, against Pennsylvania, when an injury to one of the swimmers prevented the quartet from finishing. Rosener, Summers, Hoadley, Schlaet, Ferguson and Alexander competed on the team.

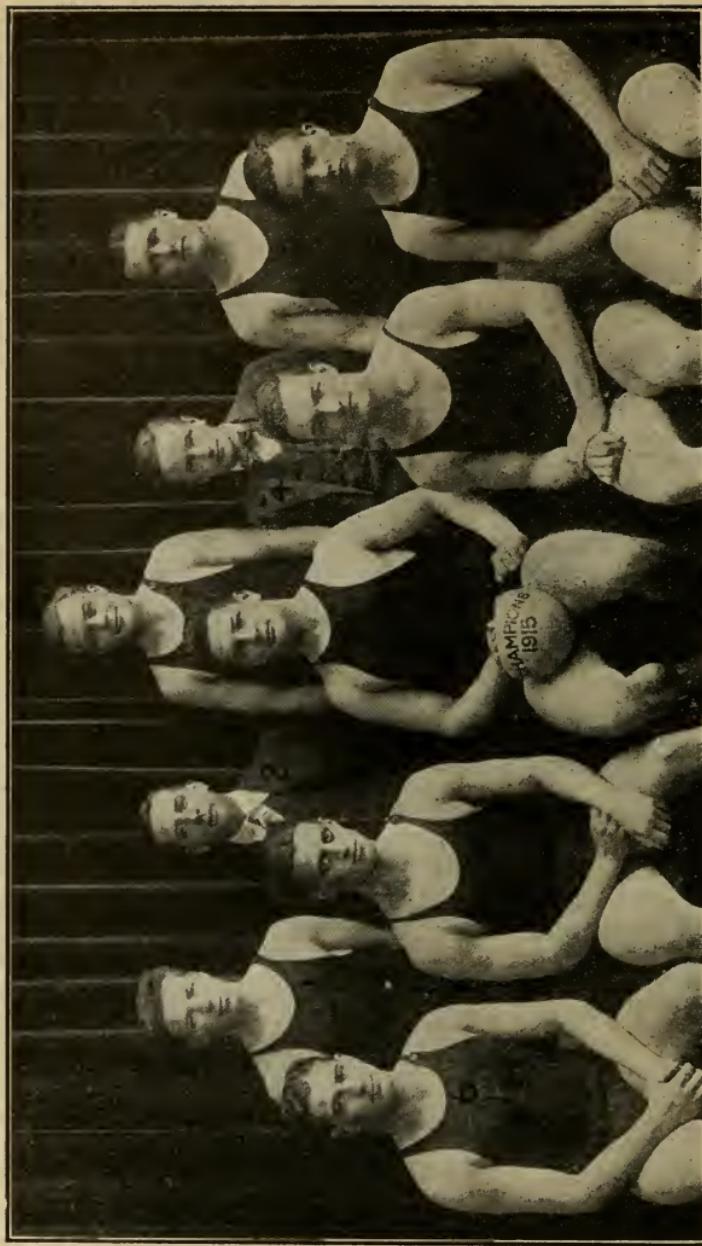
It deserves mention, in quoting the best performances, that the times made in swimming fail completely to convey the remarkable speed of some of the 'varsity cracks. Vollmer and Shryock demonstrated in open races their ability to break every existing league record. In fact, competing under the auspices of the Amateur Athletic Union, Vollmer swam 50 yards in 25 seconds flat, 100 yards in 57 3/5 seconds and 220 yards in 2 minutes 26 2/5 seconds. The furlong mark, by Cross of Princeton, is 2 minutes 31 seconds.

That the Columbia flyer did not do better in the college meets was due to the fact that he was the mainstay of his team and invariably started in three or four events at each meet. This affected his work by causing him to husband his resources in the early races and tiring him before the later ones.

On the whole, the college watermen displayed greater skill than ever before, individually and collectively.

#### ALL-STAR TEAM.

50 yards.....	Hoadley .....	Yale
100 yards.....	Vollmer .....	Columbia
Plunge.....	Lehman .....	Pennsylvania
Fancy diving.....	McAleenan .....	Yale
220 yards.....	Vollmer .....	Columbia



1. Rutherford; 2. Frank J. Sullivan, Coach; 3. Reynolds; 4. W. M. Barr, Mgr.; 5. Shipman; 6. Kahn; 7. Nourse; 8. Selby, Capt.; 9. Latrobe; 10. Battles.

PRINCETON UNIVERSITY WATER POLO TEAM.  
Champions 1914-15.

## Review of the 1915 Water Polo Season of the Intercollegiate Swimming Association

By C. D. Trubenbach, Chairman of Graduate Advisory Board of the Intercollegiate Swimming Association.

Intercollegiate water polo has come to stay. It is steadily increasing in popularity. Princeton defeated Yale last year in the game that meant the championship, before one of the most enthusiastic crowds that ever attended a college match. The game was stirring to watch and must have been a pleasure to play. It was just the kind of a game the American public loves; clean, hard, fair, interesting—and the best team won.

The season started with squads having more material than ever before. While in previous years most of the coaches had worried over the scarcity of material, the number of high class candidates last fall gave nearly all of them optimistic hopes of success. Several of the colleges formed class teams and held interclass tournaments before the championship series opened, and universities which had never before played the game took it up experimentally and have now decided to organize teams.

The playing of the championship series was remarkable in that there was not one instance throughout of a player leaving the pool because of injury. Such a record, however, is not unique in water polo. Statistics prove that it is as safe to play as tennis or croquet. In the last eleven years of intercollegiate competition not one instance of serious injury in a championship game was chronicled. Not a broken arm, or broken leg, or broken shoulder bone, or back sprained sufficiently to incapacitate, or any other like mishap has occurred. The records of 1914-15, in fact, indicate that water polo is even safer than swimming or diving. During the term a Yale man threw out his shoulder swimming in a relay race and several divers suffered from broken ear drums, sore heads, owing to collisions with the board, and other hurts, in spite of the well known safety of swimming and diving.

The season was also notable for the general clean playing. No man during the championship series was removed from the game for rough tactics. This condition has been brought about by the heavy penalties inflicted for offenses, and also because of the efficient handling of the games by the board officials. The referees, especially Mr. Handley and Mr. Ruddy, displayed rare



1—Captain Robert L. Nourse, Princeton, 1915. 2—Captain A. N. Selby, Princeton water polo team, seasons of 1914-15 and 1915-16. 3—Arthur Yates, Yale. 4—Captain H. Steiner, Yale, 1914-15. 5—Louis H. F. Mouquin, Columbia. 6—Herman Von Holt, Yale.

ALL-STAR WATER POLO TEAM.

judgment and firmness throughout the tournament, and their decisions were rarely questioned even by the losing teams.

The early season indicated that four colleges had very evenly matched material—Princeton, Yale, Columbia and Penn. All four were thought to have excellent chances of winning the championship. The preliminary games showed approximately the same scores and were close, but the better coaching of the Princeton players caused them to forge to the front later and they won the championship for the fourth consecutive year. The final standing of the league teams was as follows:

College.	Won.	Lost.	P. C.
Princeton .....	4	0	1.000
Yale .....	3	1	.750
Columbia .....	2	2	.500
Pennsylvania .....	1	3	.250
C. C. N. Y.....	0	4	.000

An analysis of results shows that Princeton scored 156 points, Yale 95 and Columbia 46, while the number of points scored against them was Princeton 40, Yale 38 and Columbia 48.

Princeton is essentially an offensive team. The forwards invariably seized opportunities and played so brilliantly that at the end of a game the team always had a safe margin of points, in spite of a relatively weak backfield. Yale had the best defensive players, but their superiority was not sufficient to withstand the force of the Tigers' scoring machine. The Columbia team was well balanced and knew the game, but neither the defense nor the offense men had speed enough to cope with speedy Princeton forwards and Yale backs. Pennsylvania had a good lot of players, but they did not seem able to retain their team work long enough to insure victory. With less individual playing Pennsylvania might have won the championship.

The above comparison of the teams gives an insight as to the selection of the All-Star team. Almost without exception the experts picked three Yale and two Princeton men, with the sixth place varying between a Columbia and a Pennsylvania man. The All-Star team picked is as follows:

#### ALL-STAR TEAM.

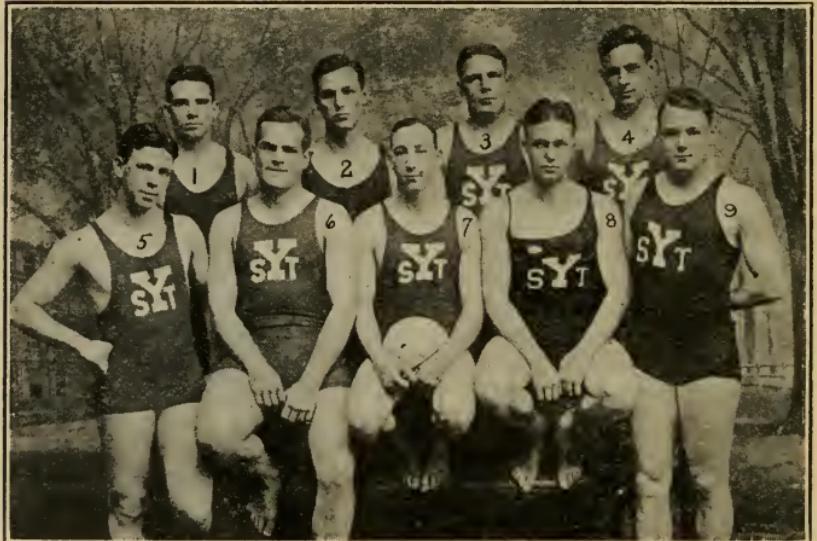
Position	Player	College
Forward.....	Nourse .....	Princeton
Forward.....	Selby .....	Princeton
Forward.....	Steiner .....	Yale
Back.....	Yates .....	Yale
Back.....	Mouquin .....	Columbia
Back.....	Van Holt .....	Yale



1, Frank J. Sullivan, Coach; 2, Mathiasen; 3, Friesell, Capt.; 4, Selby; 5, W. M. Barr, Mgr.; 6, DeLacy; 7, Shipman; 8, Laney; 9, Brereton; 10, Lester.

White, Photo.

PRINCETON UNIVERSITY SWIMMING TEAM.



1, Brophy; 2, Smith; 3, Yates; 4, Miller; 5, Mayer; 6, Von Holt; 7, Steiner, Capt.; 8, Burton; 9, Galt.

YALE UNIVERSITY WATER POLO TEAM.

The All-Star team gives Princeton two forward positions and Yale two men in the back field. Steiner of Yale seems to deserve the other forward position, although Shryock of Pennsylvania gave him a close race for it, because he scored 55 points to 40 by Shryock. But Shryock would probably have done better if he had not competed in several races early in the evening, at every meet, before entering the water polo games. Rogers of Columbia also deserves mention as a scoring forward. Mouquin of Columbia seems to have the call on the remaining back position owing to his thorough knowledge of the game and coolness at critical moments.

It was the general opinion that Nourse was the best all around player of the year. He is a giant in size and he showed speed, aggressiveness and a quick thinking head. He ranks as one of the most brilliant players in the history of college water polo.

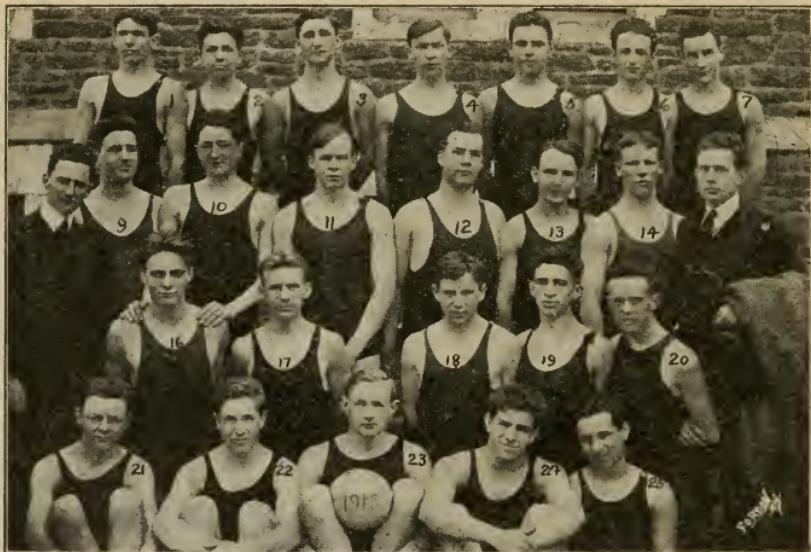
All in all, the season was remarkable for the high brand of water polo played. That Princeton should win again did not seem to detract from the interest of the spectators. It may be coincidence and it may be good coaching, but Princeton this year won its fourth consecutive championship, and this is the fourth consecutive year that Frank Sullivan has had charge of the team.



1, Whiting, Asst. Mgr.; 2, Benjamin; 3, Sloane, Mgr.; 4, Machado; 5, Mann, Coach; 6, Jenney; 7, Wentworth; 8, Fullerton, Capt.; 9, Dixon; 10, Seymour; 11, Jackson; 12, Monro.

Notman, Photo.

HARVARD UNIVERSITY SWIMMING TEAM.



1, Cruse; 2, Baer; 3, Rudinsky; 4, Kerekas; 5, Auerbach; 6, Kramer; 7, Salit; 8, J. Schulman, Asst. Mgr.; 9, G. Schulman; 10, Kilpatrick, Capt.; 11, Bosworth; 12, Jones; 13, Clendenin; 14, O'Connell; 15, Coulton, Mgr.; 16, Shauer; 17, Howay; 18, Gross; 19, Klemis; 20, Vermilya; 21, Schröder; 22, Frank; 23, Babor, Capt. water polo team; 24, Manheimer; 25, Greenberg.

Fordon, Photo.

COLLEGE CITY OF NEW YORK SWIMMING AND WATER POLO TEAMS.

## All-Star Eastern Intercollegiate Water Polo Selections for 1915

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*By Joseph Ruddy, New York A. C.*

*All-Star.*

*Reserve.*

Nourse (Princeton).....	Center .....	Shryock (Penn.)
Selby (Prince.), Capt..	Forward .....	Russell (Penn.)
Steiner (Yale).....	Forward ..	Rutherford (Prince.)
Mouquin (Columbia)....	Back ....	Latrobe (Princeton)
Von Holt (Yale).....	Back .....	Smith (Yale)
Yates (Yale).....	Goal ...	Levinson (Columbia)

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*By E. D. Kennedy, Coach Columbia Water Polo Team.*

*First Team.*

*Second Team.*

Nourse (Princeton).....	Center .....	Selby (Princeton)
Shryock (Penn.).....	Forward ...	Cooper (Columbia)
Steiner (Yale).....	Forward ..	Rutherford (Prince.)
Von Holt (Yale).....	Back ....	Noble (Columbia)
Mouquin (Columbia)....	Back .....	Smith (Yale)
Levinson (Columbia)....	Goal .....	Yates (Yale)

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*All-College. Selected by League Officials. Reserve.*

Shryock (Penn.).....	Center .....	Selby (Prince.)
Nourse (Princeton)...	Forward .....	Marcy (Penn.)
Steiner (Yale).....	Forward ...	Rogers (Columbia)
Latrobe (Princeton)....	Back ....	Mouquin (Columbia)
Von Holt (Yale).....	Back .....	Smith (Yale)
Yates (Yale).....	Goal ....	Levinson (Columbia)

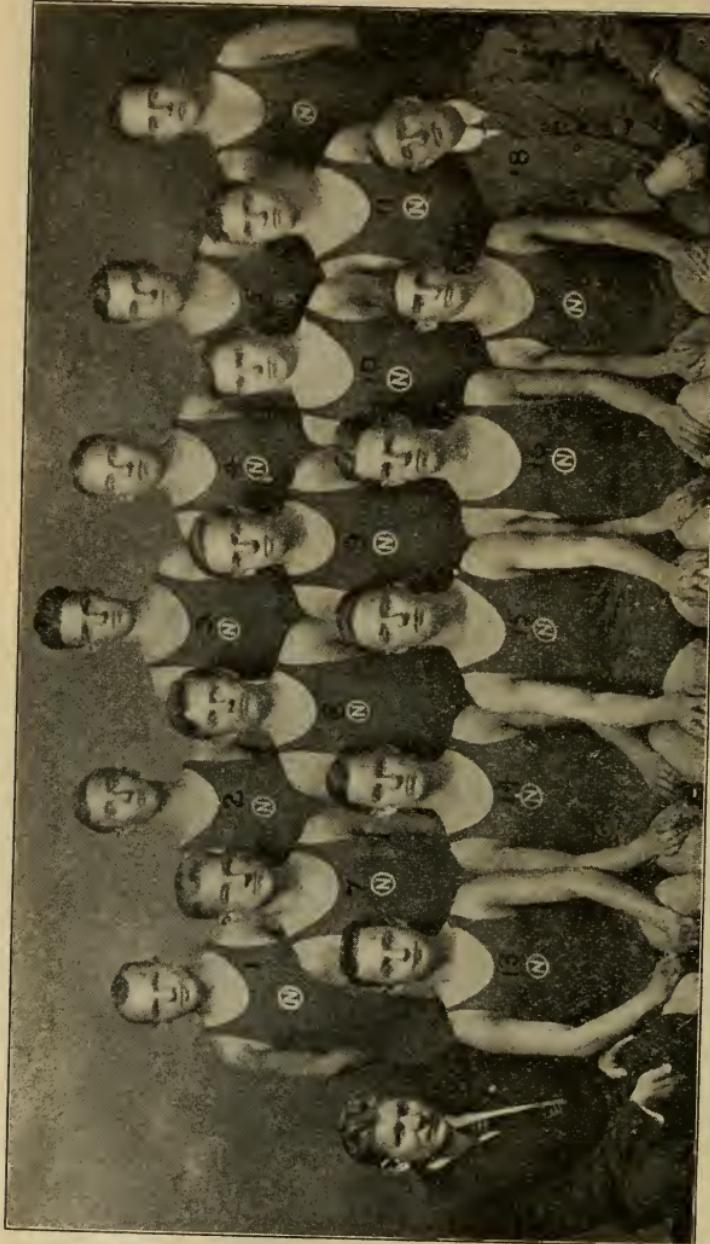
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*By Frank J. Sullivan, Coach Princeton Water Polo Team.*

*First Team.*

*Second Team.*

Nourse (Prin.) Capt... Center .....	Shryock (Penn.)
Selby (Princeton).....	Forward ..Mouquin (Columbia)
Steiner (Yale).....	Forward ..Rutherford (Prince.)
Von Holt (Yale).....	Back ....Kahn (Princeton)
Latrobe (Princeton)....	Back .....
Yates (Yale).....	Goal ...Shipman (Princeton)



1. Pisetsoski; 2, Gielard; 3, Diack; 4, Pattason; 5, Van Vissingen; 6, Busby; 7, Johnson; 8, Anderson; 9, Marquardt,  
Capt. Water Basket Ball Team; 10, McCrary; 11, Strader; 12, Robinson, Coach; 13, Pritzker; 14, Wood, Capt. Swin-  
ning Team; 15, Nelson; 16, Scoles; 17, Lima; 18, W. McGill, Trainer.

NORTHWESTERN UNIVERSITY SWIMMING AND WATER BASKET BALL TEAMS.  
Western Intercollegiate and Conference Champions, 1915.

## Swimming Season of 1915 in the Intercollegiate Conference

By Joseph H. White, Coach of Swimming University of Chicago.

Never in the history of swimming in the Western Conference was there such an interest manifested or more men participating than in the season of 1915. Not only was this noticeable in the colleges, but in the high schools and preparatory schools as well, and the interest shown had its effect upon the results achieved, which was manifest in many ways, not only in broken records, of which there were many, but were the natural consequences of clean living and careful training, and the larger growth and development and popularizing of this most healthful and beneficial form of college activity.

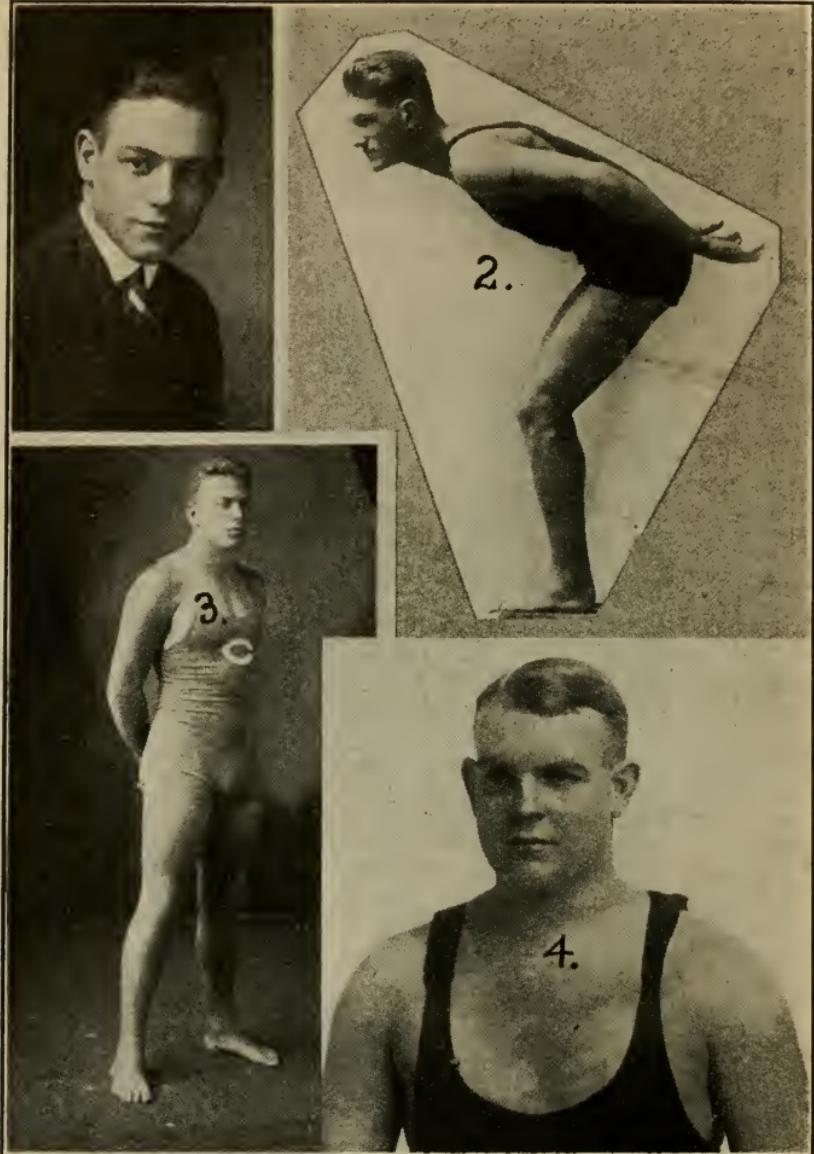
A survey of the field at the beginning of the season soon enabled one to form a pretty safe estimate of the relative strength of the Conference teams. Northwestern, with her usual wealth of material, headed by Captain Wood, Nelson, Steader, Scoles and Johnson, certainly looked like the most formidable contenders for the championship.

Chicago was the dark horse in the race, with Captain Neff, Meine, Olson, Pavlicek and Shirley in the swims; Redmon and Gardner in the plunge, and Pavlicek, Conference record holder, in the back stroke, formed the nucleus of a team that was sure to make it interesting for any team in the Conference.

Illinois was not conceded better than third place. With Captain Griffin, Chapman and Green in the swims and McDonald, Conference record holder, in the plunge, Illinois had the nucleus of a team of unusual ability, but lacked the material necessary to make a well-balanced team.

Wisconsin's team was weak, having suffered more from graduation and scholastic difficulties than perhaps any other team in the Conference. Captain Taylor, holder of the Conference record in the breast stroke, was the choice in his special event and swam true to form. Booth and Stewer did well in the swims, but lacked the support necessary to make them dangerous contenders for premier honors.

Minnesota's swimming team was a welcome addition to the Conference last year; and, although it did not decide to send a team until practically the last minute and did not suc-



1—Herbert Taylor, Wisconsin, breast stroke. 2—Vincent Johnson, Western Conference champion in 40-yard, 100-yard and 220-yard swims, 1915. 3—C. B. Pavlicek, Jr., University of Chicago, captain of swimming team for 1915 and 1916; holder of Conference back-stroke record, 150 yards, time 1m. 58 3-5s. 4—Captain A. P. Macdonald, plunger.

ALL-STAR SWIMMING TEAM, WESTERN CONFERENCE.

ceed in gathering many points in the Conference, Minnesota can be depended upon to be represented by a strong team in subsequent meetings of the Conference.

We learn with considerable satisfaction that plans are under way at Purdue whereby another university in the Conference may soon be a contender for swimming honors.

So marked has been the improvement in swimming in the Western Conference colleges that our swimmers are becoming more and more a factor in the results of our National and Central Association championships.

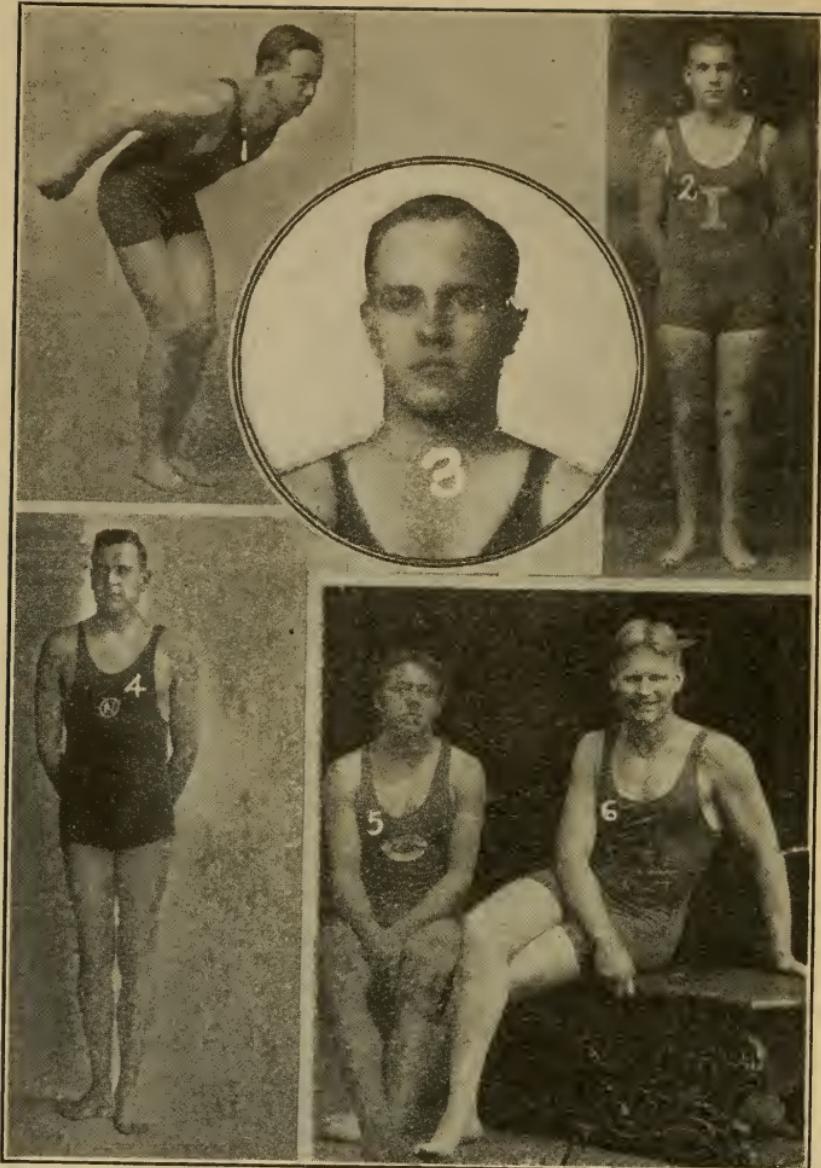
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## All-Star Swimming Team of the Intercollegiate Conference

By Edward J. Manley, Coach of Swimming  
University of Illinois.

40 yards .....	Johnson .....	Northwestern
100 yards .....	Johnson .....	Northwestern
220 yards .....	Johnson .....	Northwestern
Back stroke.....	Pavliceck .....	Chicago
Breast stroke.....	Taylor .....	Wisconsin
Plunge .....	McDonald .....	Illinois

The 1915 swimming season in the Western Conference was very successful. The fact that Minnesota entered a team in the Conference last March was highly gratifying. It shows that swimming is becoming more popular in the Western colleges. The colleges now represented are as follows: Northwestern, Chicago, Wisconsin, Minnesota and Illinois. In Vincent Johnson, Northwestern had an excellent man. He succeeded in taking the 40, 100, 220, in the Conference. Woods, his team mate, also made a good showing. Pavlicek, Chicago's back stroke swimmer, was the star of his team, winning all the back stroke events except one, which Chapman of Illinois tied with him. Captain Neff and Redmon were also good point winners. Chicago had one of the best teams in the history of the institution. Herb Taylor of Wisconsin was undoubtedly the life of the Wisconsin team and ranked as one of the best breast stroke swimmers in the Conference. The team was handicapped on account of ineligibility of some of its members. Minnesota had a few promising swimmers, who, with a little more experience, will be good competitors.



1—Captain George Marquardt, Northwestern, 1915. 2—Buzby, Northwestern.  
3—E. Fisher, University of Illinois. 4—Arthur Van Vlissingen, Northwestern.  
5—Pavlicek, University of Chicago. 6—O. A. Lausche, University of Illinois.

**ALL-STAR WATER BASKET BALL TEAM, WESTERN CONFERENCE.**

A. P. McDonald of Illinois was unquestionably the pick of the plungers in the Conference, if not of the country. McDonald has held the Conference championship for the past two years and also took the Central championship, defeating such men as Lickter and Hurtig, both A. A. U. champions. Chapman, a breast stroke man, also showed up well, defeating Taylor of Wisconsin in a dual meet and losing by a few inches in the Conference. Illinois was very badly handicapped at the Conference meet on account of a boil epidemic which afflicted some of the swimmers. With the good help of Captain Griffin, Illinois won all of the dual meets with the exception of one, which was lost to Northwestern. Although the Conference Committee has not prohibited the playing of water polo, some of the college authorities will not allow their swimmers to play the game, claiming it is a little too rough. Water basket ball was substituted in its stead as the official game. This game took fairly well, but lacked the interest shown in the old game of water polo.

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## Review of Water Basket Ball in Intercollegiate Conference

*By Thomas H. Robinson, Swimming Coach Northwestern  
University.*

After giving water basket ball a year's trial during the season of 1914, the swimming coaches of the Big Nine, in their regular annual meeting held at Chicago, November 7, 1914, unanimously adopted the game.

The way the men turned out when the call for candidates was sent out did the hearts of the coaches good. Northwestern, Chicago and Illinois held a series of interclass games early in the fall of 1914 and every class was well represented. From a spectator's standpoint the game was a great success, much more so than the old-style American polo or international polo. The game has all of the scrappy elements of American polo, with the exception of mass plays, and it seems much faster, as a good deal of passing and dribbling is used. One thing to commend the game is that the small fellow who is a good swimmer has an equal chance to make the team with the larger fellows. In fact, there were only two men out of all the Conference teams who weighed more than 175 pounds. Another thing which makes the game popular is the fact that it is easily understood, as it is very much like the floor game.

My selection for an All-Western team is as follows:



1, Fifield; 2, Schwresswohl; 3, Manley, Coach; 4, Ott; 5, Kiner; 6, Green; 7, Griffin; 8, Macdonald; 9, Chapman; 10, Crane.

UNIVERSITY OF ILLINOIS SWIMMING TEAM.



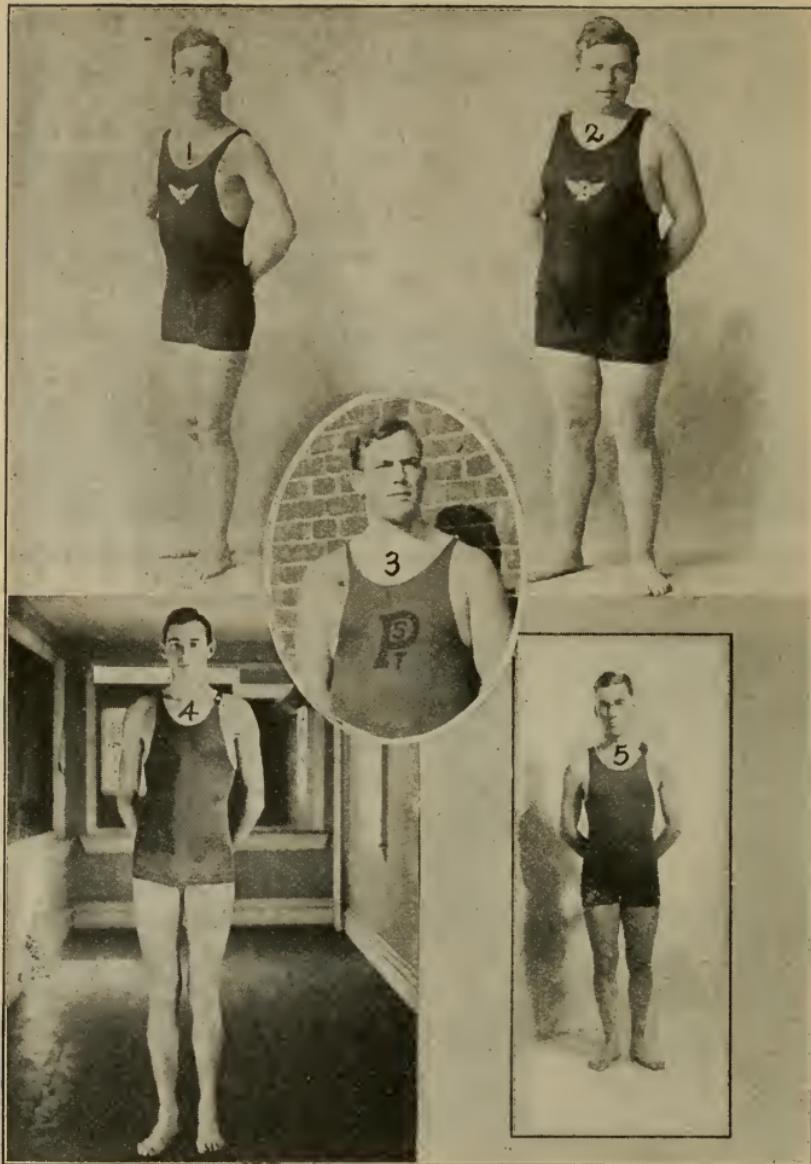
1, E. J. Manley, Coach; 2, Holmbarger; 3, McCluggage; 4, Fisher; 5, Mooney; 6, Lungren; 7, Lausche, Capt.; 8, Duncan.

UNIVERSITY OF ILLINOIS WATER BASKET BALL TEAM.

Marquardt (Capt.).....	Left back.....	(Northwestern)
Lausche .....	Center back.....	(Illinois)
Busby .....	Right back.....	(Northwestern)
Van Vlissingen.....	Left forward.....	(Northwestern)
Pavlicek .....	Center forward.....	(Chicago)
Fischer .....	Right forward.....	(Illinois)

My reason for making above selections: Marquardt showed the best headwork in handling team and players, was a sure tackler and a great fighter. He was also sure on free throws. Lausche was the strongest and hardest tackler in Conference and good in handling the ball. Busby was always in the right place, a sure tackler, and sure on passing. He was scored on only once during the season. Van Vlissingen is fast in the open, a sure basket tosser, and clever in handling ball. Pavlicek is fast in the open, and the greatest basket tosser in Conference on long throws. Fischer was good at blocking, a hard fighter, a good basket tosser and sure on free throws.

The West has supported water basket ball in royal fashion. A great many clubs and Y. M. C. A. organizations have taken up the game.



1—Leo Handy (Brookline High School), Interscholastic Champion Swimmer.  
2—A. Wales (Brookline High School), Champion Interscholastic Plunger. 3—  
Captain J. N. Shryock (University of Pennsylvania). 4—Captain Thomas H.  
Nelligan (Amherst), 1915-16. 5—Captain Hull (Brown University) 1915-16.

## Swimming at Amherst College

*By Prof. Richard F. Nelligan.*

Since the opening of Pratt Natatorium at Amherst College in 1906 the interest in swimming has increased till it has reached a very high place. The enthusiasm for this form of exercise has been fostered very largely by competition and by the yearly award of the Massachusetts Humane Society's certificate to the student of the college who has excelled in swimming and a knowledge of life saving. The average daily attendance during one week of zero weather was over 100, or 25 per cent. of the students. It has been impossible to accommodate all who wish to attend the swimming meets with other college teams.

We have evidence also that the enthusiasm at Amherst and the instruction in life saving has been the means of stimulating interest in other New England colleges having pools.

The attendance at the gymnasium, in the squash courts and on the tennis courts has materially increased since the students have realized the luxury of a shower bath and swim after physical exercise. The natatorium seems to have solved the problem how to popularize physical exercise, either in or out of the gymnasium, and the "Old Swimming Hole" is the one place in college where all can meet *sine discriminâ et sine veste*.

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## Swimming at Brown University

*By Henry G. Clark, Assistant Supervisor of Athletics.*

Swimming at Brown University was first made possible in 1903 through the erection of the Colgate Hoyt Swimming Pool, which was the first large pool to be constructed by any New England college. It is 75 feet long and 25 feet wide, with a depth of 8 feet at one end and 4 feet at the other.

The first swimming team, managed by Colgate Hoyt, Jr., was organized in 1905 through the instigation of Ogden Reid, Jr., then captain of the Yale swimming team. Since then Brown has had a swimming team each year and has met on different occasions teams representing Yale, Harvard, Princeton, Cornell, Columbia, Pennsylvania, Williams and Amherst. Brown also formed its first water polo team in 1905 and was represented in



1, Meine; 2, Pavlicek; 3, Murdock; 4, Redmon; 5, White, Coach; 6, Gardner;  
7, Neff, Capt.; 8, Shirley.

Martyn, Photo.

UNIVERSITY OF CHICAGO SWIMMING TEAM.



1, White, Coach; 2, Redmon; 3, Murdock; 4, Pavlicek; 5, O'Connor; 6, Shirley,  
Capt.

Martyn, Photo.

UNIVERSITY OF CHICAGO WATER BASKET BALL TEAM.

this branch of sport with creditable teams until 1911, when it was discontinued. Both the swimming and water polo teams have been coached each year by Charles Huggins, who has been very successful in his development of them.

Among the most noteworthy pupils were Ray Smith, 1914, whose record for 50 yards was 25.3 seconds; Rowland F. McLoughlin, 1915, whose record for 220 yards was 2 minutes and 48 seconds, and Jeffery Goldberg, whose plunge for distance was 68 feet and 9 inches.

T. M. Hull, '16, is captain of this year's team, which, like its predecessors, promises to be a successful one.

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## Swimming at Rutgers College

*By Earl Reed Silvers, Rutgers Alumni Field Secretary.*

Since 1894 Rutgers has had a swimming pool, but during that time has not been represented by a swimming team, owing chiefly to the fact that the pool was too small to permit intercollegiate contests. In February, 1915, however, the new Ballantine Pool was completed. The pool is housed in an addition to the gymnasium, approximately 45 by 101 feet, and two stories high. The pool itself is 75 by 26 feet, and the tank room is 16 feet high. The pool is 9 feet 6 inches deep at its deepest part, and 4 feet 6 inches deep at the shallow end. The pool and floor of the pool room are covered with three-quarter inch vitreous tile, with decorations in two shades of green and yellow. The building was erected at a cost of \$30,000.

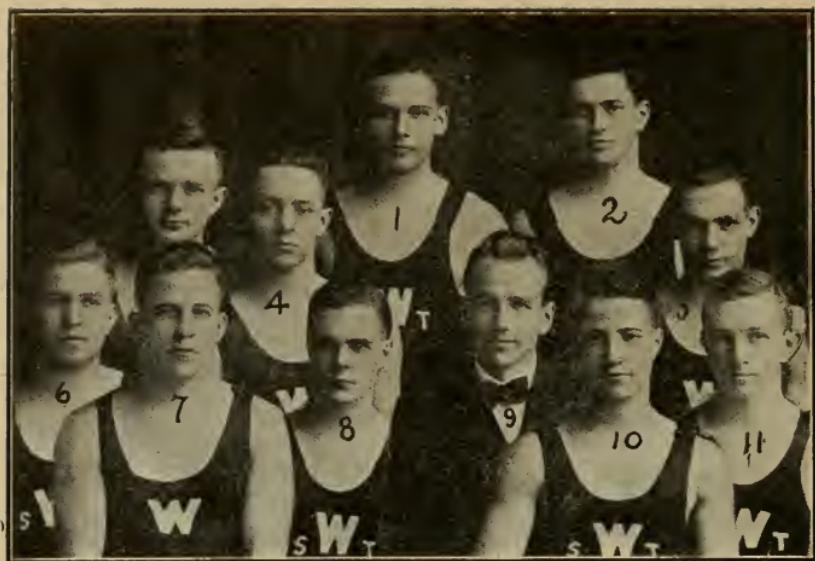
This year James Reilly, former national quarter mile champion, has been engaged as swimming instructor. He has already organized a swimming team which will meet the representatives of various colleges. This form of sport has awakened widespread interest at Rutgers, and promises to be loyally supported by the student body.

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## Swimming at the University of Pittsburgh

*By K. E. Davis, Graduate Manager of Athletics.*

The University of Pittsburgh swimming team was organized in 1912, the material being all new and there being little activity the first year except in local competitions. A good showing was made at a triangular meet with Cornell University and Pitts-



1, Wittich; 2, Fordyce; 3, Hughes; 4, Booth; 5, Taylor; 6, Nowels; 7 Steuer;  
8 Glaspell; 9, Hindman, Coach; 10, Vigneron; 11, Tillman.

UNIVERSITY OF WISCONSIN SWIMMING AND WATER BASKET BALL  
TEAMS.



1, Donnelly; 2, Payne; 3, Bieler; 4, Palmer; 5, Wagner; 6, Kreimer; 7, Butten;  
8, Langhammer; 9, Morris; 10, Lyons, Capt.; 11, Baehr; 12, Reck; 13, Howland;  
14, Richards; 15, Brett.

UNIVERSITY OF CINCINNATI SWIMMING TEAM.

burgh A. A. and several intersectional A. A. U. races were won. Ralph D. Linn, a member of the team, did the best work in the plunge, making a record of 67 feet in open competition and getting second place in the Middle Atlantic A. A. U. championship.

Improvement was shown in 1913, several new men entering who had shown ability in prep school. One of these was W. W. Swope, a consistent winner for Peabody High School, and Harold Buckland, a backstroke swimmer of exceptional ability. The only important event of this year was a triangular meet with Princeton University and Pittsburgh A. A., in which 5 points were scored. In the Middle Atlantic A. A. U. backstroke championship race Buckland lost by 6 inches in the fast time of 2 minutes 1 second.

In 1914 Pitt scored heavily in local meets. Annapolis Naval Academy was met, but the Middies scored a rather easy victory.

In 1915 the Annapolis team was again met and Pitt lost, 36 to 17. The result of the relay race decided this meet. Four new Navy records were established and each race was close. Captain Sweet won the 40-yard swim in 20 4/5 seconds, and Buckland won the 60-yard backstroke in 39 seconds (new Navy record). Swope finished second in the 100 and 220. This was the best showing made by Pitt to date in swimming.

A meet has been arranged with Navy for the coming season and, with some star prep school swimmers entered, the Blue and Gold should have a splendid team. Lovejoy of Shadyside Academy and Taylor of Allegheny Prep School are new men of considerable class. Lovejoy is one of the best fancy divers in the country and is always a strong rival for "Red" Friessell, the Princeton fancy diver, when they meet. Several meets will be scheduled in addition to Navy on the Eastern trip.

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## Swimming at Williams College

*By Edward W. Y. Dunn, Manager of Swimming.*

The building of a tank in the Lasell Gymnasium in the fall of 1906 was the step which aroused the first interest in swimming at Williams College. During the winter a team was organized, which, although not recognized by the Athletic Council, took part in several meets and succeeded in winning two firsts, a second, and a third in a meet of the Brookline Swimming Club. In October, 1907, after negotiations had been opened with Amherst and Brown for the formation of a swimming league,



1, McDiarmid; 2, Buckland; 3, Taylor; 4, John T. Taylor, Coach; 5, Fry; 6, Tanney; 7, Sweet, Mgr. and Capt.; 8, Trees; 9, Jackson; 10, Swope; 11, Smith; 12, Hallcock.

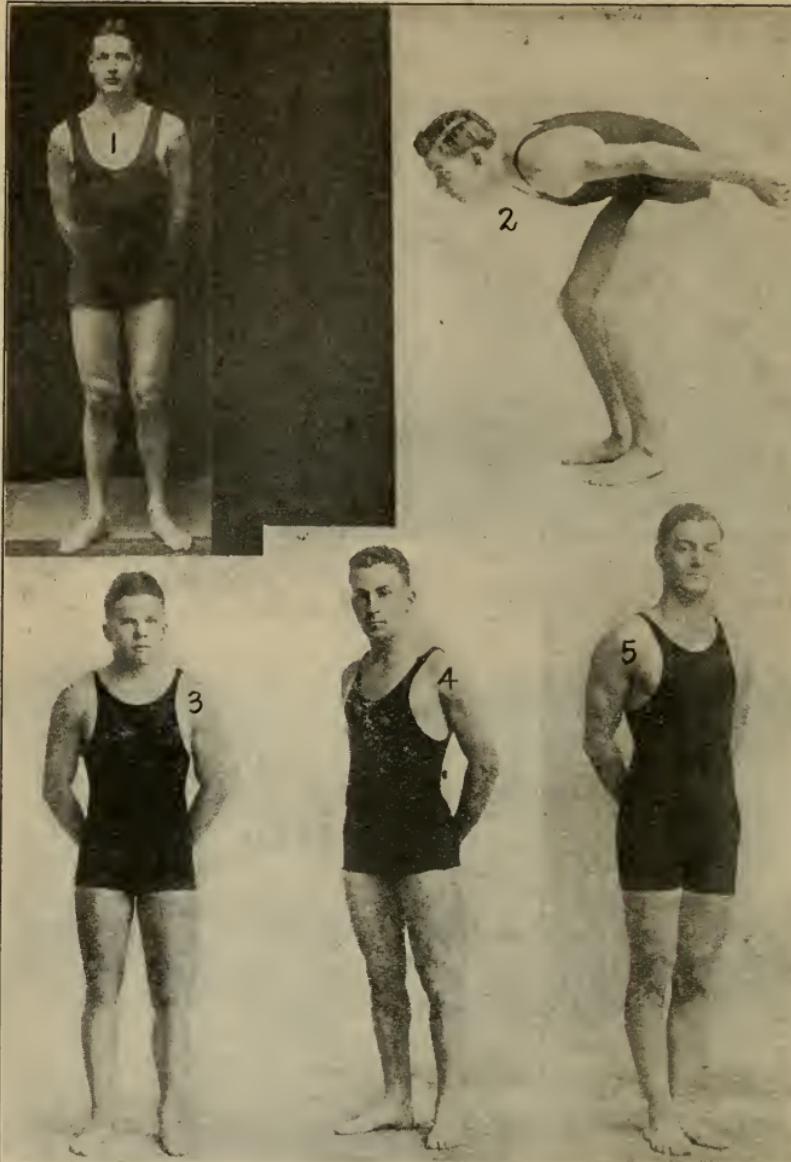
UNIVERSITY OF PITTSBURGH SWIMMING TEAM, 1915.



1, Mann, Coach; 2, Haight; 3, Browning; 4, Post; 5, Vytlacil; 6, Cauldwell; 7, Crane; 8, Leemeyer; 9, Bodfish; 10, Richards; 11, Low; 12, Cook; 13, Dashiel; 14, Erkhout; 15, Marshall; 16, Herrdon; 17, Vail; 18, Borden; 19, Boilliere.

UNITED STATES NAVAL ACADEMY SWIMMING TEAM.

the Athletic Council accorded the team recognition. Although it was not until 1910 that Amherst, Brown and Williams held a triangular meet, several dual meets were arranged during the intervening years. In 1908 Williams defeated Brown in the dual meet and in the water polo game. The following year she lost to Yale and took the first meet from Amherst, but lost the second. In 1910 Cornell and Amherst were defeated, but in the triangular meet Williams could only get last place. The Athletic Council awarded the swimming insignia SW<sub>T</sub>, for the first time to the members of the 1910 team. In 1911 the team defeated Amherst and tied with Amherst for first place in the triangular meet, but lost to Brown. During the past three seasons the team has been seriously handicapped by the lack of a coach and by shortages in the town water supply, so, with the exception of a victory over Cornell in 1912, the meets resulted in defeats at the hands of Columbia, Brown, C. C. N. Y., and last place in the triangular meets with Amherst and Brown.



1—Joe Morris, Captain Swimming Team, 1915-16, University of Cincinnati.  
2—Captain Philip T. Mallen, 1916, Union College Swimming Team, member of Chicago Athletic Club. 3—Captain W. H. Friesell, Princeton University Swimming Team, Seasons 1914-15 and 1915-16. 4—O'H. D. Brereton (Princeton), Fancy Diver. 5—C. H. Latrobe (Princeton University), member of Water Polo Team.

## Symposium on the Crawl Stroke

*Edited by Fred W. Luehring.*

The frequency with which American speed swimmers have been shattering world records has stimulated world-wide interest in the American crawl stroke which is yielding such phenomenal driving power. This stroke, which consists of a differentiation of its Australian predecessor, has been analyzed with wide variations in different parts of the country. In an effort to determine whether these differences are real or imagined, and with a view to standardizing if possible the constituent elements of this new type of stroke, the following carefully worded questions have been submitted to sixteen of our leading swimming experts:

1. What do you consider the best position of the body and the head in this stroke?
- 2(a). What, in your judgment, is the best form in the arm stroke regarding "reach," "catch," and "pull through the water"?
- (b). Should a roll of the body be introduced; and, if so, how would you describe it?
- (c). Would you modify 2(a) and 2(b) for short and middle distances; and, if so, how?
- 3(a). What are your ideas as to the most desirable leg movements in the way of the type of kick; rhythm to be maintained; width of thrash; position of legs, whether close together at knees or spread out?
- (b). Would you modify 3(a) for short and middle distances; and, if so, how?
4. At what time in the stroke should inhalation be made, and how often should one breathe for different distances?
5. Write briefly on any other important points not brought out in the above questions.

The eleven replies which have been received are reproduced in alphabetical order:

By L. deB. Handley, New York Athletic Club.

*Question No. 1.*—In swimming the crawl the body should be held as in standing erect, on tip-toe. It should rest on the water with a slight slant—shoulders higher than feet—the amount of slant being determined, partly, by the buoyancy of the individual. It is advisable to increase the slant in sprinting, as the speed at which one travels then enables the swimmer to take advantage of the hydroplaning principle. The body should roll from side to side, in order to facilitate a clean recovery of the arms. The roll is slight in sprinting, but should be emphasized more and more as the distance to be covered increases.

*Question No. 2*—The arm action of the crawl is alternate and equidistant. As one arm completes its drives the other should be "catching." Each arm is dipped close to the head and a trifle to its own side, with elbow raised, and then pushed forward under water and downward, so that on attaining comfortable full reach the hand is about six or eight inches below surface. Here power is applied and the arm is swept vigorously down and back, under the body, following a straight line from full reach to near thigh, carrying even pressure throughout. When the hand is about to touch the thigh, power is relinquished and the muscles are completely relaxed. Then the elbow is raised, lifting the forearm and hand from the water, the arm is now carried forward slowly, close to the side, and with elbow still raised, so that it will be in the correct position for entering, after recovering beyond the shoulder. The action of the arms should be slow. It is all important to make the drive energetic and the recovery very easy, in relaxation.

(b).—Answered in No. 1.

(c).—No change should be made in the arm movements at any time. Only their speed is adjusted to the distance in sight. The roll is increased gradually, with the lengthening of course.

*Question No. 3 (a and b).*—I am in favor of the trudgeon-crawl leg drive for all purposes. It consists of one or two narrow scissor kicks, taken at the end of the arm drives, as in the trudgeon stroke, and an alternate thrash of the feet introduced between scissors. In sprinting, the scissors are reduced in width, until they do not exceed the scope of the following thrash, so that a pure crawl action (merely distinguished by a more accented marking of the rhythm) is obtained. This form of drive is performed up and down (perpendicularly), or nearly so.

As the distance increases and the roll of the body is emphasized accordingly, the width of the scissor is also enlarged by

degrees and its direction becomes more and more lateral, so that eventually the scissor is performed horizontally, or almost, while the intervening thrash continues to be vertical. The scissor should never have an opening of more than 16 to 24 inches, this margin being allowed for difference in size of swimmer. The feet should never rise above water. The heels, at most, should appear.

The number of downward leg movements per full stroke of the two arms must be two, four or six. The six-beat is used by the world's fastest sprinters, but it is not generally practical for middle or long distance swimming. The two-beat is not recommendable, except for tests of out-and-out endurance. The four-beat is the ideal all 'round stroke and will be found most advantageous by the great majority.

The same principles govern both scissor kick and thrash. It should be the aim of the swimmer to avoid all possible resistance by (1) refraining from raising either upper leg toward the abdomen; (2) avoiding upward bending of the feet; (3) making all the negative movements slowly, in relaxation.

It will help the student to realize that the leg thrash is nothing but a series of reduced scissor kicks and that in using the trudgeon-crawl it is only necessary to widen one of the individual beats to obtain the scissor proper, or major drive.

This understood, it will be seen that in performing the thrash—which should have a scope of about 12 to 15 inches—the legs are in positive, driving movement for the first half of every downward and upward sweep (from full opening until they meet), and in negative movement of resistance after passing and starting to open again. Obviously, then, the first half of every beat should be made vigorous, the second in relaxation, just as in performing a wider scissor.

The direction of the thrashing legs should be forward and back, as in walking, with no lateral opening. Knees and feet should almost brush in passing. The top leg is advanced a little, nearly straight at the knee; the under one is bent back, about half way to kneeling position.

*Question No. 4.*—Breathing is done in the crawl by inhaling by mouth while the body rolls on its under shoulder, and exhaling, through the nostrils, underwater, while it is face down. Inhalation should be started toward the latter part of the top-arm drive and continued through the first half of the recovery of the same arm. The head should not be raised to inhale, but only twisted toward the upper shoulder. It is best to breathe at every full stroke. Some may possibly profit by inhaling at

every other stroke when sprinting fifty yards, though it is doubtful, but there is no question that intermittent breathing, at greater distances, is very harmful and exhausting.

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By Harry H. Hindman, Coach of Swimming University of Wisconsin.

While there may be considerable variance of opinion regarding details of the so-called crawl stroke, there are certain fundamental principles which cannot be disregarded. The problem is how to propel the body over or through the water at the greatest speed and with the smallest expenditure of energy. This involves three things, namely: resistance against the water, application of muscular power, and relaxation between periods of effort.

For purposes of clearness the stroke may be described in four parts, the Body, the Arms, the Legs, and the Breathing. Let us consider them in the above order.

#### *The Body.*

The body should have a tendency to move over the water in the manner of a hydroplane rather than through or against it. This tendency may be obtained by holding the head in such a position that the face only will be buried in the water, with the top and back of the head showing above the surface. In the case of very buoyant swimmers, the whole head may be carried above the surface. The roll of the body should be sufficient to allow absolute freedom of movement to the arms. There is no advantage to be gained in allowing a greater roll than will make possible a powerful pull with the arms and a free and easy recovery. Under no circumstances should the body be allowed to sway from side to side and thus tend to follow a zig-zag course.

#### *The Arms.*

The catch or start of the pull should be made directly in front of the head in line with the body and as far forward as can be reached, without stretching, by extending the arm from the shoulder.

The pull should begin when the hand has been lowered five or six inches below the surface of the water and on a line directly beneath the center of the body, finishing near the thigh. The hand should come out of the water not with a jerk or throw, but smoothly and as far back as can be comfortably reached by extending the arm from the shoulder.

The recovery is the rest period for the arms and should be characterized by almost complete relaxation. After coming out of the water, the arm is raised, the elbow slightly bent and the wrist and hand relaxed. In this position the arm is carried forward by a shoulder movement to the position for the next catch. The complete arm movement may be briefly described as a shoulder rotation with the arm extended. There need be no variance in the form of the arm movements over short and middle distances.

### *The Legs.*

Probably the most natural, best balanced, and at the same time most powerful leg movement is the six-beat kick, that is, six kicks with each complete movement of the arms.

I believe this kick to be more effective and more natural than the four-beat and less exhausting than the eight-beat movement. The kick should be performed in such a manner that the first and fourth kicks amount to narrow scissor kicks, each followed by two straight up and down kicks. The right foot should strike the water as the left arm finishes its pull and the left foot as the right arm completes its movement. The accent in the rhythm should come on the first and fourth beats as follows: RIGHT, left, right—LEFT, right, left and so on, with the arms finishing their respective pulls as described above. The action should take place from the hips down and the knees, ankles and feet should work freely with all tendency to stiffness eliminated. This will allow the feet to point and enable the swimmer to strike the water with the top of his feet. The legs should be slightly turned in so that the feet tend to "pigeon toedness." The kicks should be wide enough to allow free movement and enable the swimmer to "feel" the water, but not wide enough to bring the feet out of the water. The heels only should be permitted to appear above the surface. The actual width in inches would, of course, vary somewhat with different swimmers. This kick will be found practical over both short and middle distances. Over middle distances, however, the scissor kicks may be somewhat wider.

### *Breathing.*

Since proper oxygenation of the blood is so extremely important, a swimmer should secure all of the air he needs and never allow himself to feel distress by attempting to hold his breath over a number of strokes. Except in short sprints, inhalation should take place on every stroke. The most convenient and economical period in the stroke to inhale is just at the finish

of the pull of the arm on the breathing side. This brings the breathing, finish of the pull and the first kick together while the body is rolled on to the blind or non-breathing side.

In general the aim should be to develop a smooth, natural, easy movement, to eliminate as much resistance as possible, to attain the maximum of relaxation between periods of effort and to secure the greatest amount of driving force from the energy expended. In my own experience the movements so briefly described above accomplish these ends. No set rule can be laid down for all swimmers to follow, because of individual differences such as size, weight, build and natural buoyancy, but the general principles will hold for all.

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By George Kistler, Swimming Director University of Pennsylvania.

The crawl stroke is the fastest means today of propelling the body of a human being from its own power through the water, the peculiarity of this stroke being considerable.

The only movement similar to other strokes is the arm movement, the leg being entirely different. However, I am unable to say which is really the best method to use in this stroke. There are so many variations to this style of swimming and all seem good. Because one man can glide through the water faster than another is not always through having a better stroke. It is the one who has the knack in performing the different movements. I have seen poor form swimmers go through the water considerably faster than one who swam in perfect form.

Some swim with straight legs, that is, worked or swung from the hips; others work from knee down; some from both hips and knees; others take extra wide kicks, some slow, others fast, and vice versa; some with arms and legs using slow arms and quick thrash, fast arms and slow kick or thrash; others about even all through the stroke; some oscillate the ankles, while others keep feet stretched to full extent; some turn toes in at each thrash and others keep them pointed.

One can look at scores of "crawl swimmers" and scarcely find two exactly alike. Some pull arms under stomach, others on outside of body, and all at different angles; some use straight arms or extended at full length; others make a rather short reach and put them in water in front of head, pushing down on an angle to where stroke is started. Some swim with head high out of water; others keep face submerged more or less. Breathing takes place at different times with different swimmers. In fact, it makes little difference which one swims the best stroke. It is

the one who gets to the goal first, and I am unable to say which is really the best crawl stroke, as they are all good.

The "trudgeon," or double overarm with crawl and scissors combined, is practically the best and fastest all around stroke today for distance. Our ideas here that the Australian swimmers swim their crawl stroke to a "timing" system is all paper talk. The only difference is that they swim with a shade wider arm stroke in entering the water, otherwise they are about the same as we are, probably using more legwork from the knees down than we do. They discovered it from the natives over there, and Wickham was probably the first to swim this way, although the white man, Cavill, seems to have been credited with having introduced the stroke in Australia. I have drawings here showing that away back the Aborigines used the same identical stroke, although without doubt we have enlarged and improved on this style of propelling and are probably the fastest lot of swimmers in the world today using it for distances from 50 to 220 yards.

I myself like the thrash leg stroke. It seems to have more power, especially if the knee is bent the slightest bit, than the kick used from the knees only. The swimmers who use the side or scissor kick pick up the best and fastest at this particular style of swimming. They seem to catch on to the kick much easier than a breast stroke kicker. Any way, it is mostly a modified side or scissor kick. I have two or three men on my team who can swim 50 or 60 feet as fast with legs alone as most swimmers can go with use of arms and legs. Duke Kahanamoku, the world's champion and fastest swimmer, swims a beautiful leg kick or thrash, according to my mind. I trained him for six months previous to the Olympic Games in 1912 and the results have long been known the world over. His kick was continuous and very fast, arms rather slow in comparison to the leg thrash. He had no particular timing of the stroke and worked independently. I do not wish to go into the whole affair pro and con on anything pertaining to swimming, as to which is really the best stroke, as all of them have their good points.

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By Ludy Langer, Captain University of California Swimming Team.

1. *Position of the Head and Body.*

The position of the body should be as near on the top of the water as is possible with natural ease. I fully believe that the drive from the legs in the crawl is of far less importance than the fact that the kick keeps the legs and lower part of the body near the surface.

I think the head should not be held too far out of water nor too deep, using it if necessary to balance the rest of the body. If the legs and back have a tendency to come too far out of water the swimmer, by holding his head a little higher, will cause his legs to go down a bit and vice versa.

## 2. *The Arms.*

(a). I find that the natural tendency for most swimmers is to bend the arms too much at the elbows and also to lift the elbow too high when bringing the arm forward for the next stroke. This method loses energy and time. The method which I prefer and use is to bring the arm forward with a swing out over the water just high enough to clear it. By this method you can relax almost every muscle in the arm, bending at the elbow only enough to give added relaxation to the arm.

The reach should be straight out from the shoulder and should be far out before entering the water, instead of putting the hand in close to the head and extending it under water to full arm's length. This saves time and energy.

(b). There should be very little roll of the body, just enough to help the arm clear the water and to elevate the shoulder so that the arm may be brought forward with a minimum of effort. Too much roll is worse than none at all.

(c). I think the reach should be extended farther out as the distance increases, because there is more time for extending the arm and it also lengthens the stroke. The natural tendency in the shorter distances is to shorten the reach, but care must be taken not to shorten it too much.

The roll should also be decreased for the shorter races because of the extra energy and time it takes to roll from one side to the other. For the longer distances the roll should be gradually increased with the distance, the limit being reached when the arm can be easily brought forward without lifting it too high above the water.

The pull through the water should be such that the swimmer has the best hold on the water at all times during the stroke. This can be determined by the amount of effort required. It is harder to pull the arm through the water when one has a better hold on it. The natural but incorrect tendency is to pull the arms through the water in either a zig zag fashion or to let them bend at the elbows when they are under water, instead of pulling them straight through from a point directly out from the shoulders and not letting them go under the body or away from it when extended straight down.

### 3. *The Legs.*

(a). I think the leg drive should be learned and used independently from the arm stroke. I think the whole secret to the leg drive is to relax the legs absolutely. Most swimmers kick too hard, too often, and open their legs too wide. The best way to describe the kick I think is to leave the legs as loose as possible and then try to shake the ankle off the foot. In this operation the legs should not open more than from nine to twelve inches and should be absolutely loose at the hips and knees.

(b). I think the legs should be kept close together at all times. In a short race the kick should be fast but no harder and no wider. As the distance becomes longer the kick should become slower and still as loose as before.

### 4. *Inhalation.*

This is a question of individual study after the first principles have been mastered. As the swimmer rolls so that the side which is always in the water when he swims single overhand is the lower side in the water the head should be turned slightly more than the roll but not lifted, and the sight should not be directed ahead. This places the head in a position most favorable for taking in a good big breath at every stroke in a long distance swim. Then roll over to the other side and exhale under water just before coming back into position to take the next breath.

In the shorter races a breath may be taken at every stroke of a given arm, at every other one, or possibly at even greater intervals. This must be decided upon in individual cases by careful observations. I might add further that the inhalation should be made before the arm which is uppermost starts forward for the next stroke. It should be started just as it starts to leave the water and ended before it is one-quarter way back to the forward position.

### 5. *MAKING USE OF NATURAL ABILITY and relaxation.*

The biggest mistake is to hold yourself tense while swimming. It does not take great effort to propel oneself forward in the water. In fact it is just as easy as walking when done in the right way. *Perfect relaxation in the water is essential before one can get the greatest pleasure and ease out of swimming and achieve success in the races.* Another essential is to study oneself to discover natural ability and limitations. To try a method of swimming just because some swimmer with a big reputation swims that way may be absolutely wrong, for the successful swimmer may be successful in spite of numerous faults, or his

method may be absolutely unsuited to the qualifications and limitations of others.

*Do not expect success in competition without hard work, and do not expect success right away, because it takes as much time to work up in this sport as in any other form of athletics. Too many swimmers lose heart because they do not advance rapidly enough, but they should consider that in trying to go forward too fast one usually does not pay enough attention to form, a shortcoming which prevents maximum efficiency.*

*It is my theory to work slowly and perfect the form, and when the swimming form has been perfected speed will come unless there are physical reasons to the contrary.*

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**By Lionel B. MacKenzie, Coach of Swimming College of the City of New York.**

*Question No. 1.—The position of the body in the crawl stroke should be prone, with a normal extension on the whole body; as near parallel to the surface of the water as the above position will allow.*

*Question No. 2 (a).—The arms on the reach forward should be normally extended at right angles to the width of the shoulders. In reaching forward from the finish of the stroke, the elbow should be bent and elevated to enable the hand to clear the surface of the water. The pull or stroke through the water should be downward, until the hand is below the body, then swerving inward in a described arc finishing fully extended at the side of the body. The describing of the arc inward or under the body calls for a slight bend of the arm at the elbow. The pull or stroke should be backward, to eliminate as much as possible the body pressure and draught in the water.*

*(b).—The rolling of the body in the crawl stroke is for the purpose of breathing. It should be done in one movement of the whole body and should take place between each arm stroke. The roll should be to one side only, and to that side easiest to breathe on. In practice the roll may be changed to the other side, for the purpose of developing an equal or uniform thrash with the legs.*

*(c).—In distance swimming the roll and breathing between each arm stroke is recommended, because the more inhalation the less strain and fatigue. In short distance swimming the roll and breathing takes places when physically required, and varies from four or five strokes to every fifteen or twenty. The rapidity of the stroke only changes.*

*Question No. 3 (a).*—The legs should be normally extended and their action and that of the feet should be a vertical thrash from the hips to the feet. In rolling the body the action of the legs and feet ought not to change, but the action of the thrash will change to lateral. The thrash should be confined to that width which is between the points of resistance, encountered when the legs are raised too high or submerged too deep. The thrash with the minimum resistance is essential. The rhythm of the thrash should be that which can be controlled in co-ordination with the arm stroke.

(b).—The above stroke should be used for short and middle distances.

*Question No. 4.*—Inhalation should take place when the body has rolled to the side. This takes place between each arm stroke. In distance swimming the above is recommended. In short distances or sprints, at those intervals suitable to the endurance of the individual. The holding of the breath combined with the physical action between intervals of breathing is very fatiguing and is the general cause of exhaustion in sprint races.

Many swimmers have to use a great deal of their stroke at certain points of fatigue, in order to keep the body afloat. It has been noted that many of our fast swimmers are very buoyant, thereby using the greater part of the stroke for propulsion. Many swimmers exhale under water or before the roll and inhale on the roll. It has been especially noted, in cases of fatigue, that during this short interval of exhaling and inhaling the body has increased its draught, and caused considerable effort in getting the face above water on the roll.

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By **Edward J. Manley, Coach of Swimming University of Illinois.**

The body is kept as close to the surface of the water as possible. Place the head in such a position as to allow the water to strike just above the eyes.

The average swimmer should take a long arm stroke, extend the arms, and "catch" with the hand straight in front. Buoyant swimmers find it well to slide the hand in the water just a little before the arm has reached its full length. Bring each arm straight down with a decided pull until it is even with the hip. A slight roll from the waist up should then be made to allow the clearing of the arms from the water. Then the arm should be brought out with a little jerk from the shoulder, bent slightly at the elbow, and again thrust forward.

The legs should be extended, feet pointed and turned inward, legs about a foot or little more apart from the knees down. Do not hold the legs rigid. Work the legs up and down alternately, moving the whole leg and keeping knees bent very little. In the downward thrash, the legs should work independent of arms in most cases.

The inhalation should be taken as the arm is lifted from the water. A breath should be taken at every other arm stroke for a distance swim. For a short distance, say a 40 or 50-yard swim, inhalation should be made about every sixth complete stroke.

The crawl stroke of today is a very hard stroke to describe as there are many ways of swimming it. You cannot apply the same style to every swimmer, there being hardly two persons who can use the stroke alike. It is all on the same principle, but the build of a man will change the desired form a great deal. It is up to the coach to study his man and frame up a stroke to fit his build.

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By Matthew Mann, Formerly Swimming Supervisor Town of Brookline; Former Coach of Harvard 'Varsity and U. S. Naval Academy Teams; Now with New York A. C.

I am a crawl stroke man from the beginning to the end. I teach the crawl as an elementary stroke and have done so much better than ever I could have done with the breast stroke that I never teach anything else. Referring to the crawl, for the racing man:

*Question No. 1.*—The best position for the crawl stroke swimmer is perfectly flat with the face in the water, only turning the head to take a breath. The reason of this position is that there is less resistance than if you keep your head up or if you roll to, get your breath.

*Question No. 2 (a).*—The best reach of the arm is so that your hand, beginning with the tips of the fingers, is in the water before any part of the arm is in, meaning that the fingers are commencing the drive before the elbow begins to resist. It is not a pull of the arm but more of a drive. It is not possible to pull the water, but you throw your shoulder forward to where your hand takes the water, making it more after the form of a lift of the body to the hand, not pulling the hand to the side.

*(b).*—A swimmer can roll when swimming a 220 or over by just reaching a little deeper into the water with the drive; it enables him to get a breath easier, also it brings in a distinct small side kick, which is quite an asset in the longer swims.

*Question No. 3.*—Both the arm and the leg kick are changed in the distances. In the sprint the body is kept perfectly flat, the arms taking the water a little in front of the head, but out at the side. They are forced down to a point just underneath the thigh; there they are lifted with the relaxing of the muscles in the elbow, and brought forward with a distinct shoulder action. The kick is a good thrash with a loose knee snap, so that the feet come out of the water. The kick is perfectly balanced, each leg doing its share, the feet lifting out of the water anywhere from one to four inches. The kick is also an independent motion, each swimmer having a little difference in the motion.

There is no perfect time that you could recommend to any collection of swimmers. They will find out the correct time to apply their kick as they proceed in proficiency. Some swimmers kick very fast, while others kick very slow.

The crawl stroke for distances over 100 yards should be swum with a roll and a slight side kick, not bending the knees at all; of course keep muscles relaxed so that they don't cramp. The feet should be used as if you were on your toes all the time, and also try to get the habit of toeing inwards.

*Question No. 4.*—The breathing is one of the chief reasons why so many men fall down on the crawl; they do not pay enough attention to it, and when they do meet someone who does breathe right they are usually second.

The best way to insure getting your breath at all times is to stand in the pool and first of all take in a breath, then put your head under water, then turn your head to the side; do not lift up the head, try and keep the ear in the water; just as you turn the head begin exhaling through the nose; when the mouth is just clear of the water open it wide and take in a quick breath through the mouth, then repeat, making sure that head does not lift, but only turns. This should be done very slowly at first. When you feel it is coming all right, start to swim slowly and turn your head the same way; do not hurry, or you will get too much water, but take it easy, until you are sure that you can get all the breath you need.

It is best at all times to take a breath on every stroke, when a man is breathing right. However, until he gets it right, the breath should be taken in a sprint race every three or four strokes, but not longer, as that would put too great a task on the heart. Special work should be given all men to help their breathing, for the man who breathes best will win nine times out of ten.

By R. F. Nelligan, Associate Professor Hygiene and Physical Education at Amherst College, Amherst, Mass.

*Position of Body.*

In executing the crawl stroke the position of the head and body are important. If the abdomen is drawn in and the back humped up, the under part of the body will present a concave surface to the water, a faulty position which tends to plunge the head and feet too low, thus hindering the swimmer. If the back is slightly concave these faults disappear, the legs work to better advantage, the head being not so deeply submerged enables the swimmer to look ahead and to right and left more easily and also to breathe more freely than is possible with the head too low in the water. This latter position is also more advantageous to a powerful use of the arms.

*Arms.*

The best results from the use of the arms in the attainment of speed may be described as follows: With the wrist slightly bent the hand is thrust forward and slightly downward entering the water about three-quarters of the distance between the shoulder and the extreme reach, with the elbow raised and bent a little. If the elbow is not raised the upper arm comes in contact with the waves in the negative part of the arm movement and the swimmer is retarded. The extreme reach or the straightening of the arm takes place under water before the arm is pulled back in the positive or catch part of the stroke and therefore care must be taken by keeping the wrist at such an angle that the arm is straightened without hindering the swimmer. This requires a slight bending downward at the wrist. When done correctly it will be found that when the pull commences the hand will be about six inches below the surface. Each arm should enter in front of the shoulder and the body should roll slightly toward the pulling arm when going at top speed in order to apply full power. In distance work the roll is more pronounced, and the hand enters the water more nearly at the full reach. In sprinting or in distance swimming it will be readily seen that if the arm and hand forming a straight line is laid flat on the surface at the full reach, the pull really does not commence until the arm is well beneath the surface, and to get it there in this way is too slow and tiring to be of value. The arm should be pulled back well under the body and this results in a slight outward sweep of the arm at the end of the pull as the body rolls face down. When pulled nearly all the way through the arm leaves the water cleanly. It is a common mistake to raise the arm before the stroke

is finished—*i. e.*, before the hand reaches the hip or possibly a little farther back. In reaching forward for a new stroke the arms should bend at the elbow rather than swing around at the sides so as not to tire the shoulders. Both pull and recovery should be well inboard for the full application of power and conservation of strength, and this means endurance and speed. Raising and bending the elbow results in a clean, smooth, straight, and easy recovery, and a smoother roll and application of power, than is possible with a straight arm swing around at the sides or overhead. The roll should come wholly from the swing of the arms rather than from a spasmodic movement of the body.

#### *Breathing.*

Inhalation should be through the mouth in speed swimming. By turning the head this becomes easy with practice. One who naturally swims on the right side should turn the head upward to the left just enough to enable him to fill the lungs. Exhalation should take place under water as the body rolls forward. The breath should never be held even in a 50 yards race. The writer has coached swimmers who ignored this advice for a time and who thought it advisable to swim face downward for the first 25 yards of a 50 yards race, but in every instance the time was faster when the swimmer was prevailed upon to breathe on every stroke. Swimming short races is hard work and it is physiologically wrong to hold the breath in a 50 yards race or in any race over 25 yards.

#### *Kick.*

The kick seems to be the bone of contention with coaches. When first introduced into this country I very enthusiastically commenced experimenting after reading everything I could find about it. First I thought it must be a rapid movement of the feet, somewhat similar to pedalling a bicycle with a short crank and without co-ordination with the arm movement. Lying flat on the water with arms extended I found that I could make considerable headway in this manner with the feet alone. The arms were then brought into action, but the legs tired so readily and had to be used so violently to be of any use for propulsion when the arms were working that I became disgusted. After seeing the best exponents of the crawl in this country I was convinced that the pedalling movement was useless. They seemed to get propulsion from a downward and upward thrash of the legs, with the emphasis on the downward movement. The width of the kick varied greatly and it was soon observed that the swimmers using the shorter kick, other things being equal, seemed to be able not only to attain greater speed but also to crawl a longer

distance without becoming exhausted. The quickest way to tire an athlete is to make him use the legs vigorously and this led the writer to believe that the narrow kick was the better. Another reason in favor of the narrow kick seemed to be that the arms worked faster when an attempt was made to co-ordinate the arms and legs' movements. It certainly slows the all important arms' movements to kick wide and it tires the swimmer. It soon dawned on the writer that in most cases the would-be crawl stroke swimmer placed too great a value on the legs as a means of propulsion, and that a wide thrash was not only tiring but acted somewhat as a drag also. About this time it was reported that Handy of Chicago used a legless crawl, but experiments with this proved that it was hard to get a fast quick catch without a leg thrash. It then seemed to the writer that the principal use of the thrash was to enable the swimmer to use the arms to good advantage by steadyng him and this did not require a wide slowing and tiring leg movement, but rather a sharp downward short beat, principally from the hips, repeated with each leg to both arm movements; in other words, four kicks to two arm movements complete the stroke. Swimming the trudgeon stroke with a very short scissors kick and adding a one, two, downward beat with the legs when the body rolls face downward is a form of stroke we hear much about lately, and it may, after all, be the best speed stroke. It is certainly easy to teach it to a man who swims the trudgeon correctly. All that is necessary is to get him to reduce the width of the kick in the trudge. He will feel instantly that the speed of the arms increases, and to keep his balance for a firm catch he will almost instinctively add the one, two, downward thrash between scissors kicks, as the body turns face downward. This gives to the stroke rhythm. The writer used this form of stroke for years, and after the swimmer attained it he found that the same movement, done without turning the hips, or at least turning them but very little, resulted in an upward and downward thrash or, in other words, a straight crawl. Some preferred the combination trudge and crawl while others liked the straight crawl. In the straight crawl the body is turned principally from the waist, while in the combination the hips turn with the body as the scissors kick is executed. I am unable to say which is the better method for the average swimmer because I have not sufficient data to prove the superiority of either stroke. At present I rather favor the straight crawl. In any form of crawl the kick should be narrow—just enough to enable the swimmer to get a firm catch. In distance work the kick is naturally a little wider than it is when going at top speed. The toes should be pointed well backward and slightly inward

in both methods, and the kick should be so narrow that the feet remain under water. The legs should be extended backward naturally. Slight variations from the above methods are noticeable in all large swimming meets.

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**By Frank J. Sullivan, Coach Princeton University.**

There are so many theories regarding the crawl stroke advanced by coaches throughout the country, no one of which will confirm another, that it seems foolish to advance any one theory as the correct one. At the present time there are at least ten different styles of crawl, each having a large following. There is only one question that all American coaches agree on and that is, that the original crawl or Australian crawl, as it is commonly called, is obsolete today. The American crawl of the four, six or eight-beat kick has proved so successful over the users of the original method that Australian, German and English swimmers are endeavoring to master the intricacies of the American stroke.

There is no doubt in my mind that the stroke which produces the best results is the best stroke. It is plainly evident then, that to find the best stroke, one must analyze the method used by Hebner, McGillivray, Langer, Raithel, Vosburgh, Vollmer and other star swimmers of this country. To do this as it should be done would fill a volume, but the several basic principles may be written in a few words.

Careful observation on the part of several of our leading swimming authorities, as to the stroke used by the above mentioned swimmers, has brought out the conclusion that these swimmers use what is now generally known as the "trudgeon crawl." It is this type that I recommend to all swimmers, for it can be used for any distance—from 50 yards to ten miles.

I have had the privilege of reading in the manuscript Mr. Handley's article, which is contained in this symposium, in which he describes the trudgeon crawl in a much better way than I could, so to go into detail about this stroke would be merely a repetition of ideas which already have been advanced satisfactorily in Mr. Handley's well written article.

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**By Thomas G. Whitaker, Coach of Swimming Misssouri Athletic Association, St. Louis, Mo.**

*Question No. 1.—Keep the body as high on the surface as possible. The head should be held so that the water reaches the eye-brows.*

*Question No. 2 (a).*—Keep the elbows slightly bent. The hand goes in before elbow, in front of head—not crossing over to opposite side, however. The arm should be straightened out about one foot under surface. Pull deep and down center line of body, making the recovery to the side.

(b).—In sprints have the body as flat as possible. Employ no more roll than is occasioned by using shoulders forcibly.

(c).—Yes. (2-b) is answered in previous question regarding sprinting. For distance swims, lengthen arm reach slightly, increase roll, with complete relaxation between strokes.

*Question No. 3 (a).*—For sprints a fast, powerful kick with as fast a leg beat as is possible to the complete arm stroke, or cycle—that is, to two arm movements the maximum appears to be six to eight leg beats, arrived at unconsciously with most swimmers. Width of thrash should be six inches to a foot. Keep legs loose all over and not more than a foot apart.

(b).—Yes. As fast a beat as possible for short distances. For middle distances either a four-beat kick to two arm strokes, or a two-beat kick—left leg on left arm pull and vice versa. Or a new kick I've worked on, in which a decided roll is taken on each arm pull. For instance, when on the left side, the left leg is underneath and delivers a sort of scissors kick and vice versa on the right side.

*Question No. 4.*—Breathing should be indulged in during the last half of the stroke and first part of recovery. Up to 50 yards breathe as little as possible, after that on every complete stroke.

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By Joseph H. White, Swimming Instructor University of Chicago.

*Question No. 1.*—Keep the body horizontal and as near the surface of the water as possible with head slightly submerged.

*Question No. 2 (a).*—Reach as far forward as possible raising the elbow high enough to enable the hand to clear the water. Catch with the minimum of splash as far in front of the head as possible and pull through the water directly under the body, carrying arm stroke as far back as possible.

(b).—A slight roll of the body which enables one to get the maximum reach both forward and backward with the least expenditure of energy is desirable.

(c).—Modify 2-a in the short dashes by bending the arm very slightly, which, in my judgment, permits of a little more rapid

movement of the arms. Modify 2-b in the dashes by a less frequent roll, as the swim is soon over and the need for air is less apparent.

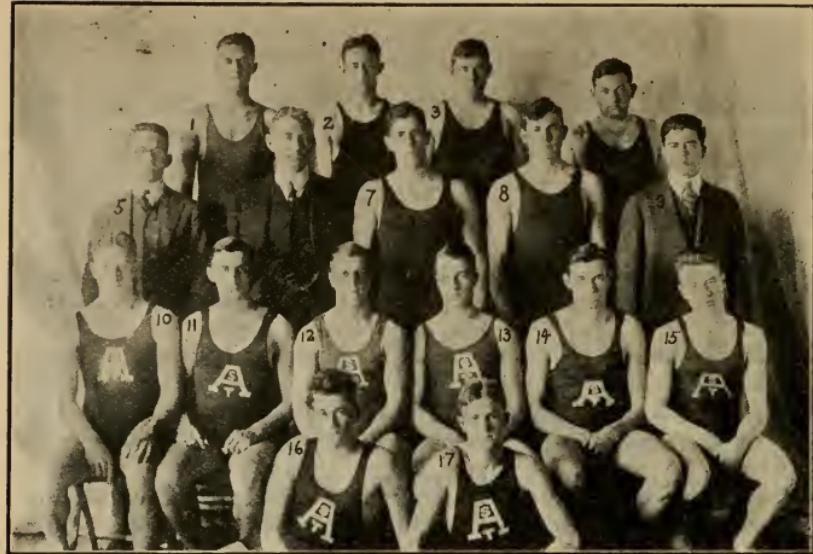
*Question No. 3 (a).*—The most desirable leg movement is a kick or thrash with the legs alternately about ten inches or twelve inches in length, legs slightly bent at the knees; toes pointed. The thrash is made by straightening the leg, together with a slight movement at the hip. Legs should not be spread except as above noted.

The rhythm to be maintained should depend upon the length of the swim entirely, for the dashes (50 to 100 yards) a rapid thrash, which should be moderated for the middle distances (220 and 440 yards), and must be still more moderated for the longer distances.

*Question No. 4.*—Inhalation should take place for the swimmer who takes his breath while on his right side as the left arm is being carried forward, or, as his right arm is carried forward provided he breathes more naturally on his left side, a matter of individuality entirely.

How often one should breathe for the different distances varies so with each individual that it makes it very difficult to even suggest how often one should breathe. I should say, however, generally speaking, that for the 40 and 50 yards (assuming the tank to be 20 or 25 yards in length) breathing twice going the first length and three or four should be considered the limit for the second length. In the hundred yards a breath with every fourth stroke, counting one with each arm. In distances over 100 yards a breath with every second stroke, counting as above, one with each arm.

*Question No. 5.*—Exhaling under the water through the nose.



1, Johnson; 2, Brinkerhoff; 3, Miller; 4, Johnson; 5, Newton; 6, Nelligan, Coach; 7, Whetten; 8, Shumway; 9, Park, Asst. Mgr.; 10, Rider; 11, Ames; 12, Washburn; 13, Lemcke; 14, Nelligan, Capt.; 15, Jessup; 16, Webster; 17, Baker.

AMHERST SWIMMING TEAM, SEASON 1914-15.



1, E. S. Hall, Diving Coach; 2, Dr. Fauver, Phys. Dir.; 3, McCarthy; 4, Wilkinson; 5, Hallock; 6, Hunter, Trainer; 7, Morris, Mgr.; 8, Kynett; 9, Sutherland; 10, Turner, Capt.; 11, Eustis; 12, Morningstar.

WESLEYAN UNIVERSITY SWIMMING TEAM, MIDDLETON, CONN.

## Proposed Rules for Form Swimming Contests

By Frank J. Sullivan, Swimming Director Princeton University.

The growing interest among colleges, schools, athletic clubs, Y. M. C. A.'s and playground associations in the most efficient methods of propulsion through the water has stimulated wide research in the various possible swimming strokes. There has been endless experimentation, especially by coaches and speed swimmers, directed towards analyzing the leading possible strokes into their necessary constituent movements, and a study of these essential movements, with the aim of eliminating all retarding evolutions and perfecting those which yielded greater driving power. This return to elementary principles has emphasized the need for more specific information as to what the fundamental strokes are, and what constitutes correct form in each. The present article embodies an attempt to reach this end in a new way by drawing up a set of rules for form swimming contests with a graduated scale of penalties to be inflicted for practicing disadvantageous movements.

By this manner of presentation it is hoped that the material will possess added utility since it will (1) pave the way for a more complete standardization of fundamental strokes and their form; (2) the graded penalties will give helpful information concerning the relative disadvantages encountered in the employment of the most common retarding movements; (3) it will facilitate further experimentation on an organized scale towards the goal of greater efficiency and (4) that it will serve to popularize still further technical information on the only one of the more valuable athletic sports which may be pursued with good results, by young and old, either indoors or outdoors during all seasons of the year.

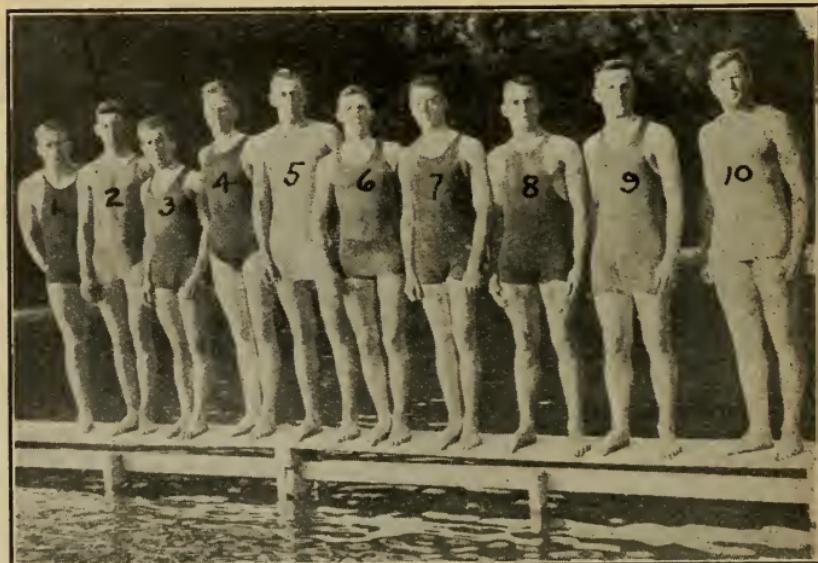
The modern form swimming contest should consist of the following program of events and in the proposed order: (1) Plain front dive; (2) breast stroke; (3) back stroke; (4) side stroke; (5) single overarm; (6) double overarm; (7) crawl stroke.

The plain front dive is included in order to teach contestants to enter the water most advantageously. The swimming strokes, following this event, are now generally recognized by leading swimming authorities as comprising all the fundamental methods



1, Smith; 2, Williamson; 3, Huggins, Coach; 4, Hincks; 5, McLoughlin; 6, Scherer; 7, Abbott, Mgr.; 8, LaRoe; 9, Long. Ye Rose Studio, Photo.

BROWN UNIVERSITY SWIMMING TEAM, 1914-15.



1, Kidder; 2, Lewis; 3, Marston; 4, Booth; 5, Mosher; 6, McElroy; 7, Lindsay; 8, Smith; 9, Langer, Capt.; 10, Brandstein, Coach.

UNIVERSITY OF CALIFORNIA SWIMMING TEAM, 1915.

of propulsion through the water. All other so called strokes are merely differentiations of these basic movements.

The order of events given, groups the strokes on the basis of the leg movements, the chief source of motor power. The breast and back strokes depend mainly on the frog kick. The scissors kick is used in the side, the single, and the double overarm, with a modified scissors in the crawl. The order also provides a gradual progression of increasing speed, from the slow moving breast stroke to the crawl—the acme of swimming development.

## 1. PLAIN FRONT DIVE.

The contestant should begin by assuming momentarily an easy and graceful position of attention, on the take-off. He should then spring as high into the air as possible. While in the air and before entering the water, the body must be brought into the following position: Heels and legs together, toes pointed back, arms extended to the sides and at right angles to the body, palms turned back, fingers together, back slightly arched and head held erect. The entry into the water should now be made as close as possible to the take-off, the arms extended above the head, with hands together and with a minimum of "splash." The dive should be considered completed, only when the toes have disappeared below the surface of the water. The contestant should then proceed to the breast stroke position without any unnecessary movements. Failure to comply with any or all of the above conditions should lead the judge to deduct from one to ten points.

## 2. BREAST STROKE.

In this stroke the body must be kept continually on the breast, with both shoulders on a line with the surface of the water. The position at the beginning and at the end of each stroke should consist of having the arms extended in front of the head, palms together, fingers closed, legs straight, heels together and toes pointed slightly to the sides.

Progress through the water should then be made as follows:

- (1) Turn palms slightly outward, and then bring arms simultaneously backwards, to a position at right angles to the body, and on a line straight with the shoulders. (2) Bend arms sharply at elbows, bringing hands inward until the fingers touch. With this movement, draw the legs up by spreading out the knees side-wise, while at the same time keeping the heels together and pointing the toes upwards and slightly outwards. (3) The finish of the



1, Toohey; 2, Packard; 3, Conklin; 4, Reilly, Coach; 5, MacEwan; 6, Barr;  
7, Herben; 8, P. Moore; 9, Thorpe; 10, Walker; 11, Haines; 12, F. Moore.

RUTGERS COLLEGE SWIMMING TEAM.



1, Kruidenier; 2, Veith; 3, Schopper; 4, Thorn; 5, Brown; 6, Evans; 7, Jouannet;  
8, Kingman.

INTERNATIONAL Y. M. C. A. COLLEGE SWIMMING TEAM, SPRINGFIELD,  
MASS.

stroke should be made by shooting the arms forward with palms together, while kicking the legs simultaneously outwards and backwards until the whole body is again in the starting position.

Inhale through the mouth while the arms are brought backward, as in the first movement, and exhale through the nostrils while the kick is being made and as the arms are being shot forward.

PENALTIES.	Deduct
For use of other than frog kick.....	5 points
If legs are drawn up before arms are brought back..	3 "
If legs are drawn up under abdomen, instead of to the sides .....	2 "
For incorrect breathing.....	2 "
For failure to resume starting position at the end of each completed stroke.....	2 "
For submerging head. (Immersing face is permissible.)	2 "
For each violation of any other of the prescribed conditions .....	1 "

### 3. BACK STROKE.

The following starting position should first be assumed: Lie on back, legs straight, heels together, head well back, chest high, arms straight and at the sides, so that the hands touch the thighs. The inverted frog kick should be used, and both arms must be kept under water. In the first movement, the hands should be drawn up across the abdomen and chest, while the legs are kept straight and the feet together. As the arms are stretched outwards on a line with the shoulders, the legs should be drawn up "frog fashion" as in the breast stroke.

The final movements should be made by pulling the arms down to the sides of the body and completing the kick at the same time, thus placing the contestant in the starting position again. He should then rest in this floating position before beginning the next stroke, in order to gain the maximum advantage from the combined movement.

If the scissors kick is used the arms should be reached back out of water, alternately, and the kick must be made on one arm only. The arms should be bent slightly at the elbows, and an easy roll of the body is desirable. If the crawl kick is used, the arms should be reached back in the same manner as in the scissors kick back stroke.

PENALTIES.	Deduct
If scissors kick is used on under-water arm stroke.....	5 points
If frog kick is used on alternate overarm stroke.....	5 "
For failure to observe correct form in the inverted frog kick.....	3 "
If frog kick is used with arms out of water.....	3 "
For stiff arm movement in crawl or scissors kick strokes .....	3 "
For kicking on each arm pull in scissors back stroke...	3 "
For failure to bring hands up over abdomen and chest, before reaching out to sides in frog kick back stroke	2 "
If body is bent forward as legs are drawn up.....,	2 "
For incorrect breathing.....	2 "
If legs are drawn up as arms are drawn up, in frog kick back stroke.....	1 "
If head is ducked while using frog kick stroke.....	1 "

#### 4. SIDE STROKE.

This stroke should be swum with the contestant lying on either side, although the right side is preferable. The legs should be kept straight at the start, the under arm reached forward and the upper kept straight at the side. The arm stroke should be alternate, and care should be used so that neither arm breaks water. The scissors kick must be used, i. e., the legs are drawn up, keeping the knees and ankles together, and then the upper leg is extended forward, while the under leg is simultaneously extended backward; the opening and the closing of the scissors must be made in a vigorous manner and without any hesitation between the two movements. This kick must be made on the pull down of the upper arm and as the under arm is reached forward. The breath should be taken in through the mouth as the upper arm is reached and the exhalation through the nostrils should be made on the kick. Looking ahead in this stroke is considered poor form as direction may be had from the side.

PENALTIES.	Deduct
If frog kick is used.....	3 points
For rolling on breast as upper arm is reached forward	2 "
If legs are drawn up as upper arm is reached forward	2 "
If upper leg is extended backward instead of forward in scissors kick.....	2 "
For incorrect breathing.....	2 "
For looking ahead.....	1 "
If upper arm is pulled through water as in the breast stroke, instead of being pulled downward.....	1 "

## 5. SINGLE OVERARM.

This stroke is essentially the same as the under arm side stroke, the sole difference being that the upper arm is advanced above the water and the body is given a quarter roll on the breast at the same time. In reaching forward, the upper arm is raised from the water by (1) relaxing the forearm, then (2) elevating the elbow to a height that will permit advancing the hand in a direct line passing near the head, just above surface of the water. The catch should be made before the arm is fully extended and at a point a little in advance of the head.

PENALTIES.	Deduct
If kick is made as each arm is advanced.....	5 points
If upper arm is reached forward in stiff or cramped manner .....	2 "
If elbows are not kept high in recovery of upper arm	2 "
Deduct additional points for faults as in the side stroke.	

## 6. DOUBLE OVERARM.

The double overarm differs from the single overarm only in that the body is turned entirely on the breast, with the face immersed, to permit raising the under arm above the water, preparatory to reaching forward.

PENALTIES.	Deduct
If under arm is not kept clearly above the water in reaching forward .....	3 points
Deduct additional points for faults as in the single over-arm and side strokes.	

## 7. CRAWL STROKE.

Standardization of this stroke is very difficult owing to the different methods of crawl used, any style of which may be considered as correct. With the exception of one type, the arm stroke is the same, namely, as in the double overarm, the catch being made on a straight line in front of the head with arms slightly bent. The exception is what is commonly known as the Australian crawl; in this stroke the arms are reached forward alternately in quite a stiff manner and the catch is made with the arms on the side and a little in advance but away from the head, while the kick is used as a two-beat thresh, i. e., the right leg is kicked in an up and down thresh as the left arm is extended and vice versa.

In the four-beat and six-beat crawls, which are the American improvements on the Australian type, the arms are extended in a relaxed manner in advance of the head and the catch is made at the point directly in front of the head. In this stroke the rhythm is maintained by kicking, respectively, two or three beats on the pull of each arm.

In addition another type of crawl, termed the "trudgeon crawl" is characterized by the interjection of a small straight legged scissors kick on the pull down of the breathing arm, while a comparatively slower up and down thresh is maintained between the scissors, and a roll of the body is made as in the double over-arm.

Breathing varies a great deal in the different types of crawl. In the trudgeon crawl, inhalation is made once on each complete cycle. In the American type of four-beat and six-beat crawl, the breath is taken usually on every second or third completed cycle. In the Australian crawl there is no rhythmic breathing, the swimmer arranging for himself the precise moment for inspiration.

Considering the difficulty of standardization, judges are required to note the following principles when awarding points: In a form contest speed is not essential, more important consideration being ease, grace, rhythm and evidence of latent speed.

Points should be deducted as in the double overarm.

## Officials of the Intercollegiate Swimming Association

SEASON OF 1915-16.

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### COLLEGES

COLLEGE OF THE CITY OF NEW YORK.

COLUMBIA UNIVERSITY.

UNIVERSITY OF PENNSYLVANIA.

PRINCETON UNIVERSITY.

YALE UNIVERSITY.

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### OFFICERS

*President,*

J. W. ALLISON, JR.  
(Columbia).

*Vice-President,*

J. G. SCHULMAN  
(C. C. N. Y.)

*Secretary-Treasurer,*

H. M. OSGOOD  
(Pennsylvania).

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### GRADUATE ADVISORY BOARD

C. D. TRUBENBACH (Columbia), Chairman,  
30 Church Street, New York City.

EDMUND W. ILL (Princeton), Secretary,  
188 Clinton Avenue, Newark, N. J.

J. C. STODDART (Yale),  
100 William Street, New York City.

FRANK K. MARCY (Pennsylvania),  
Rahway, N. J.

FRANK MULLEN (C. C. N. Y.),  
430 East 84th Street, New York City.

# CONSTITUTION

OF THE  
INTERCOLLEGIATE SWIMMING ASSOCIATION

## I. NAME.

The name of this association shall be the INTERCOLLEGIATE SWIMMING ASSOCIATION.

## II. OBJECTS.

To promote the sport of swimming among the colleges.

## III. MEMBERSHIP.

- (a) Any college shall be eligible for membership.
- (b) Members must keep the Secretary and Treasurer posted of any change of management and of the address of the manager.
- (c) Any college can withdraw from the association by sending in a resignation signed by the manager and the captain of the aforesaid college swimming team.
- (d) Any college desiring to join the association shall send to the President a written application to be submitted to the Executive Committee. A majority vote of all colleges in the association shall be necessary to elect to membership.
- (e) Any college may become an associate member of the Intercollegiate Swimming Association for a period of not less than two years, by making application in writing, and by the payment of \$25, which must be made on or before the first day of March.

Associate members are entitled to enter contestants in the individual championships.

## IV. OFFICERS.

The officers shall consist of a President, Vice-President, Secretary and Treasurer, and an Executive Committee, consisting of representatives from each college, President to preside and represent his college.

## V. ELECTION OF OFFICERS.

- (a) The President, Vice-President, Secretary and Treasurer

shall be elected annually at the annual meeting held on the last Sunday in October of each year.

(b) Any man is eligible to office who is a member of his college.

## VI. DUTIES OF OFFICERS.

(a) The President shall preside at each meeting of the association and enforce all laws and regulations of the association.

(b) The President shall appoint all sub-committees and preside over the Executive Committee.

(c) The Vice-President shall perform the duties of the President in his absence.

(d) The Secretary shall conduct all official correspondence of the association, issue notices to all members of the association of all meetings and perform such other duties as may be assigned to him by the association and keep a list of meets and records.

(e) The Treasurer shall keep all accounts of the association, receive all money of the association, and at each annual meeting make a written statement of the financial condition of the association, and shall perform such other duties as may be assigned to him by the association.

## VII. MEETINGS OF THE ASSOCIATION.

(a) The association shall meet each year, the last Sunday in October, at a place selected by the Secretary of the Graduate Advisory Committee, who will issue notices of this meeting to the manager of the swimming team of each college two weeks previous to this date.

(b) Each college shall send at least one representative, but no more than two.

(c) Each college shall have one vote only.

(d) Order of business shall be:

1. Election of officers for ensuing year.
2. Reports and communications.
3. New business.

(e) A special meeting may be called whenever the officers of the association shall think it necessary or when two colleges shall make a written request to the President for such a meeting.

(f) One-half of the colleges in the association shall constitute a quorum at any meeting of the association. Notices shall be sent at least one week before said meeting is held.

(g) There shall be a meeting of the association on the after-

noon of the day on which the Indoor Individual Championships are to be held. Dates for play-off in championships must be set at this meeting.

The Individual Indoor Championships meet shall be held on or before the fourth Saturday in March.

No dual meets shall be held after the Individual Championships except in the case of ties, when they must be played on or before the last day of March, the date to be arranged by the association at its meeting just preceding the Individual Championships.

### VIII. AMENDMENTS.

The Constitution may be amended by a two-thirds vote of all the colleges in the association.

1. Each manager shall procure the officials for the home meets and submit their names to the manager of the visiting teams for his approval; the officials of the Individual Championships shall be appointed by the association.

2. The different colleges shall be entitled to hold the Individual Championships at home in their regular order, the order being: Columbia, Pennsylvania, Princeton, C. C. N. Y., Yale, starting with Columbia in 1916.

3. There shall be an Advisory Committee, consisting of one graduate member, interested in swimming, from each university or college. Members of this committee shall be appointed for a term of three years. Their power shall be purely advisory, excepting the power of their Secretary to call the first meeting of each year, no vote being allowed them. They shall submit a list of officials to the association for approval each year.

### IX. ENTRANCE FEES AND DUES.

Entrance fees shall be ten dollars (\$10.00) for each college entering the association. The dues shall be fifteen dollars (\$15.00) annually, payable before December 15th.

**CONSTITUTION**  
OF THE  
**Graduate Advisory Board**  
OF THE  
INTERCOLLEGIATE SWIMMING ASSOCIATION.

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**I. NAME.**

The name of this board shall be THE GRADUATE ADVISORY BOARD OF THE INTERCOLLEGIATE SWIMMING ASSOCIATION.

**II. OBJECT.**

The purpose of this board is to consider the problems affecting, in its broadest sense, the furthering of the art and sport of swimming among the colleges, and, after careful deliberation, to submit such conclusions as may be reached to the Executive Committee of the Intercollegiate Swimming Association, with suggestions as to the carrying out of the same.

**3. MEMBERSHIP.**

(1) Only one representative is to be sent each year from every college in the Intercollegiate Swimming Association.

(2) The names of the representatives are to be submitted to the Secretary of the Intercollegiate Swimming Association not later than three weeks before the first annual meeting of the Executive Committee of that organization, to enable the Advisory Board to hold its first annual meeting prior to the first annual meeting of the Executive Committee.

(3) It shall be the right of any member of the Graduate Advisory Board to attend and have the privilege of the floor at any meeting of the Intercollegiate Swimming Association during the year in which the said member is a member of the Graduate Advisory Board.

**IV. OFFICERS.**

The officers shall consist of a Chairman and a Secretary, each representing his college.

## V. ELECTION OF OFFICERS.

- (1) The Chairman and Secretary shall be elected each year at the first meeting of the board.
- (2) Only representatives from colleges in the Intercollegiate Swimming Association are eligible to office.

## VI. DUTIES OF OFFICERS.

- (1) The Chairman shall preside at each of the meetings of the board, and shall enforce all rules and laws of the board.
- (2) The Chairman shall appoint all sub-committees.
- (3) The Secretary shall preside over the regular meetings of the board in the absence of the Chairman.
- (4) The Secretary shall conduct all official correspondence of the board, issue notices of all meetings and perform such other duties as may be assigned to him by the board. He shall also keep careful minutes of the meetings and of the suggestions submitted to the Intercollegiate Swimming Association.

## VII. MEETINGS OF THE BOARD.

- (1) The Board shall meet each year, not later than four days before the first annual meeting of the Executive Committee of the Intercollegiate Swimming Association.
- (2) Each college shall send at least one representative.
- (3) Each college shall have only one vote.
- (4) Order of business shall be:
  1. Election of officers, when necessary.
  2. Reports and communications.
  3. New business.
- (5) The secretary of the Intercollegiate Swimming Association shall notify the secretary of the Graduate Advisory Board of the time and place of any and all meetings of the Intercollegiate Swimming Association at least one week in advance of the said meetings.

## BY-LAWS OF THE INTERCOLLEGIATE SWIMMING ASSOCIATION.

### I. INTERCOLLEGIATE CHAMPIONSHIPS.

The association shall each year award separate championships in swimming and in water polo.

Each college holding full membership in the association must enter a swimming team and a water polo team in every league meet.

The championships in swimming and water polo shall be open only to colleges holding full membership and shall be decided by a series of meets in which each college of the association shall meet every other college twice, once at home and once abroad, the championship being awarded to the team having the highest percentage standing at the end of the season.

Championship plaques of suitable design shall be awarded by the Intercollegiate Swimming Association to the championship teams.

### II. EVENTS.

The program and order of events shall be as follows:

1. Relay Race (4 men, each to swim at least 50 yards).
2. Fancy Diving.
3. 50 Yards Swim.
4. 220 Yards Swim.
5. Plunge for Distance.
6. 100 Yards Swim.
7. Water Polo.

### III. SCORING OF POINTS.

In all dual meets points shall be scored as in Rule V, Section 1 (b) of the Intercollegiate Swimming Rules.

In the relay race 8 points shall be given for first place and no points for second.

The team having the greatest number of points shall be declared the winner of the swimming meet.

In water polo the team scoring the largest number of points shall be declared the winner.

#### IV. TIME OF MEETS.

The Individual Outdoor Championships are held during the latter part of June. The date is not decided until after the Indoor Championships. Other Eastern colleges are invited to enter contestants in the Outdoor Championships.

No date for a dual meet can be changed except by mutual agreement of the colleges concerned, or by permission of the association, and when such permission is granted a new date shall be fixed by the association, and the team refusing or unable to compete that night shall forfeit.

#### V. ELIGIBILITY.

No man who has played on a team or teams in the association four years can compete; but outside of this any man eligible to represent his college can compete.

#### VI. CASE OF TIE.

In case of tie the championships shall be decided in a neutral tank.

#### VII. EXPENSES.

In all dual league meets the home team shall keep all gate receipts. Each visiting team shall defray its own expenses. All other expenses of holding such meets shall be paid by the home team.

#### VIII. REFEREES AND OFFICIALS.

No graduate or alumnus or person connected with either competing college shall be allowed as a referee or official except by mutual agreement.

At the first meeting of each year there shall be a number of referees and judges appointed by the Intercollegiate Swimming Association. Any team may insist on these approved judges officiating in any meet. It shall be the duty of the home team to provide one referee, three judges and three timers, acceptable to the Intercollegiate Swimming Association. The referee shall be chosen by the managers of the opposing teams.

The Graduate Advisory Board shall appoint one of its members Head Referee. His duty shall be to select a referee for meets in which the managers of the contesting teams cannot agree on a referee.

#### IX. INDIVIDUAL CHAMPIONSHIPS.

The Intercollegiate Swimming Association shall each year hold an indoor individual championship meet at a place to be decided by the Executive Committee. No points shall be awarded for places in this meet nor shall it have any bearing on the inter-

collegiate championship. The college holding the meet shall award medals from the regulation die to winners as follows: Gold medals for first places, silver medals for second places and bronze medals for third places. The gate receipts shall go to pay for the expenses of the meet and any surplus up to twenty dollars shall go into the treasury of the association for future use.

The program and order of events for the Individual Championship meet shall be the same as in Rule I of the Intercollegiate Swimming Rules with the single exception that the relay race shall be composed of Freshman teams only.

## X. RULES.

The Intercollegiate Swimming Association officially adopts the National Collegiate Rules, on Swimming and Water Polo for all meets, with following exceptions:

### (a) IN SWIMMING:

Rule V, Section 1.—First place in the relay to count 8 points and second place no points.

Rule VII, Section 4.—Eliminate words "with hand clearly out of water."

Rule VII, Section 5.—To read as follows: "A black line at least three inches wide shall be painted lengthwise down the center of the pool and in all dual meets the two contestants from each college shall swim on same side of the line. If a swimmer crosses the line so as to interfere with another contestant he shall be disqualified.

Rule XI, Section 2.—Eliminate entirely dives Nos. 3, 23, and 25; and dive No. 6 standing. Change values of dives as follows: Dive No. 4 to 1.7, dive No. 6 to 2.2, dive No. 9 to 2.0, dive No. 11 (standing) to 1.7.

### (b) IN WATER POLO:

Rule IV, Section 3.—Eliminate "except as stated in Rule 8, Section 4."

Rule VII, Section 6.—Substitute the word "three" instead of "two" in the sentence "No player except two backs, etc."

Rule VII, Section 7.—Insert the following after the first sentence: "Exception: When the ball is within the four-foot section, tackling may be allowed anywhere within this section."

Rule VIII, Section 3 (g).—Substitute the word "four" instead of "three" in the sentence "Three players, etc."

Rule VIII, Section 4.—Change second and third sentences to read as follows: "A substitute shall be allowed for a suspended player. When a player is disqualified, a substitute may take his place immediately."

EDMUND W. ILL,

Nov. 8, 1915.

Sec'y of the Graduate Advisory Board.



1, Mann, Coach; 2, Bird; 3, Wales; 4, Stewart; 5, Swimming Manager; 6, McKinnon; 7, Prendergast; 8, Handy, Capt.; 9, Untersee.

BROOKLINE (MASS.) HIGH SCHOOL SWIMMING TEAM.  
Eastern Interscholastic Champions, 1914-15.



1, Robinson, Coach; 2, Durness; 3, Kock; 4, Grey; 5, Krumm; 6, Johnson; 7, McKinzie; 8, Spooehr; 9, George; 10, Ramsy; 11, Betts; 12, R. Huszah, Capt.; 13, Hayford, Mgr.; 14, Wyeth; 15, Olson; 16, McKinzie.

EVANSTON (ILL.) ACADEMY.  
Western Dual Meets Interscholastic Swimming Champions,  
Seasons 1913, 1914, 1915.



1, Town; 2, Goetz; 3, George; 4, Grassel; 5, Erickson, Capt.; 6, Johnson; 7, Farrell; 8, Carlson, Coach; 9, Brown; 10, Levy, Mgr.; 11, Keppler.

LANE TECHNICAL SCHOOL SWIMMING TEAM.  
Chicago High School Athletic League Champions.

## Schoolboy Swimming Activities in New York City

*By C. Ward Crampton, M.D., Director of Physical Training,  
Department of Education, City of New York.*

Swimming was first introduced for schoolboys on February 26, 1907. On this date the high schools swimming championships were held in the public pool located at 232 West Sixtieth Street, New York City. Five events were contested, 20 yards tub race, 50 yards, 75 yards, 100 yards and 160 yards relay (four boy team, each boy swimming 40 yards). The only record now standing on the record books for this meet is the 20 yards tub race. Since that date this event has never been contested in a championship meet. Each year since 1907 a high school swimming championship has been held in the Townsend-Harris Hall Natatorium. This is the preparatory department of the College of the City of New York. During the past three years the public high schools conducted a dual swimming tournament, and as a grand finale of the season the championship meet is conducted by the Public Schools Athletic League.

Owing to the great success the league met with in this sport in the high schools, they decided to hold an elementary schools swimming championship on Saturday morning, April 20, 1909. Five events were contested, divided into four weight classes, 20 yards, 80 lbs. class; 40 yards, 95 lbs. class; 60 yards, 115 lbs. class; 80 yards, unlimited weight class; 160 yards relay, for boys of any weight. This meet was a decided success and a championship meet is held on the second Saturday morning of April each year.

On July 1, 1911, at Sheepshead Bay, N. Y., the first and only outdoor swimming championship for elementary schoolboys was held. The regular list of events were contested and the records made are the official records for outdoor swimming.

Relative to the P. S. A. L. records, I would state that the only recognized records are those made in P. S. A. L. championship meets for both elementary and high schools. Records made in sanctioned and dual meets are not recorded by the league.

During the year 1913 the Department of Public Buildings and Offices extended the use of all public pools in Manhattan to the Department of Education, so that they could teach swimming to all boys under fourteen years of age. During the first year of this work the total attendance in the three pools from January to June was 27,505; of this number 1,450 boys were



1, Peters; 2, Searle; 3, Pratt; 4, Strout; 5, Tilton; 6, F. Kingsbury; 7, Emerson, Mgr.; 8, Sutherland, Coach; 9, Gould; 10, Mayer; 11, Fitzgerald; 12, Bradley; 13, T. Kingsbury.

ANDOVER (MASS.) ACADEMY SWIMMING TEAM.



1, Roeselle; 2, D. K. Luke; 3, Davidson; 4, McGaffney; 5, Moore; 6, Jackson; 7, H. W. Richter; 8, T. Luke; 9, Franzheim; 10, Bullen; 11, C. W. Richter.

White,

LAWRENCEVILLE (N. J.) SCHOOL SWIMMING TEAM. Photo.



1, Arthur, Coach; 2, Jackson; 3, Newhard; 4, Randolph; 5, Lichty; 6, Iserson; 7, Williams; 8, Hart; 9, Tibbitts, Capt.; 10, Gray; 11, Spicer; 12, Soars; 13, Woodward; 14, Phillips.

Rogers, Photo.

MERCERSBURG (PA.) ACADEMY SWIMMING TEAM.

taught to swim. It was estimated that the per capita cost to teach a boy to swim was 27 cents. The pools were opened for the use of these boys two hours a day, three days a week. During the year 1914-15 it was necessary to make use of the new pools just completed in Manhattan and the one pool in Brooklyn, making a total of seven pools; the attendance from October to June was 160,050, 8,925 boys were taught to swim and the per capita cost to teach a boy was a fraction less than 15c.

In addition to teaching the normal boy the art of swimming, the Department of Education set about to instruct the deaf, dumb and blind boys and the results attained were beyond the expectations of those most interested in the work. This instruction was conducted one hour and a half, one day a week.

During the months of February and June tests in swimming are held and a bronze button is awarded to the boys who accomplish the standards set by the Public Schools Athletic League. The following standards are required of elementary schoolboys:

Breast stroke (20 yards swim..)	26 seconds
Overhand stroke (20 yards swim)	20 seconds
Each stroke must be executed in good form.	
Plunge for distance	20 feet
Simple forward dive.	

This must be executed in good form and is passed upon by the judge assigned to the test.

The number of badges won by the boys taking the test were 666 for the year 1915.



1, Brownback; 2, Gibb; 3, Hovery; 4, Kinnard; 5, Morris; 6, Coffin.

HAVERFORD (PA.) SCHOOL SWIMMING TEAM.



1, Welsh; 2, King; 3, Summerville; 4, Brown, Mgr.; 5, Jaquith; 6, Lombard; 7, Dean, Capt.; 8, Tracy; 9, Brown; 10, Seaburk; 11, Byrne. Horner, Photo.

MECHANIC ARTS HIGH SCHOOL (BOSTON) SWIMMING TEAM.

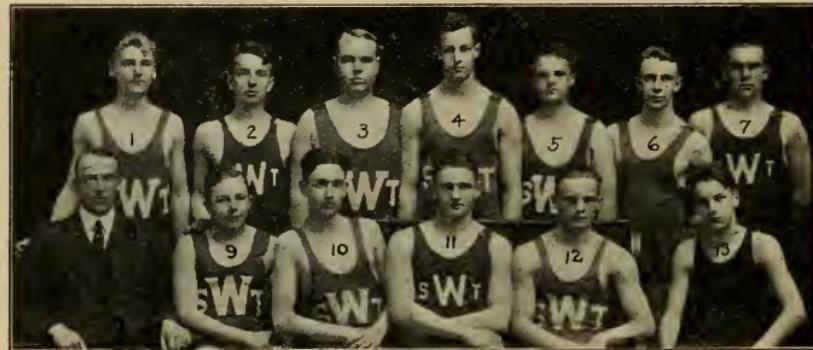
Interscholastic Champions of Boston.



1, E. Scovill; 2, Wilson; 3, Shepard; 4, Gilpin; 5, J. Scovill; 6, Dodge; 7, Roof; 8, Kelley; 9, Mr. Curtiss, Coach; 10, Crego, Capt.

UNIVERSITY SCHOOL (CLEVELAND) SWIMMING TEAM.

Interscholastic Champions of Cleveland.



1, Resenmiller; 2, Bailey; 3, Shuttleworth; 4, Dickson; 5, Briggs; 6, Greene; 7, Brabrook; 8, Hazelton, Coach; 9, Stevens; 10, Kaichen; 11, Shaw, Capt.; 12, Allen; 13, Flynn. Schervee, Photo.

WORCESTER (MASS.) ACADEMY SWIMMING TEAM.

## SCORES OF DUAL SWIMMING MEETS.

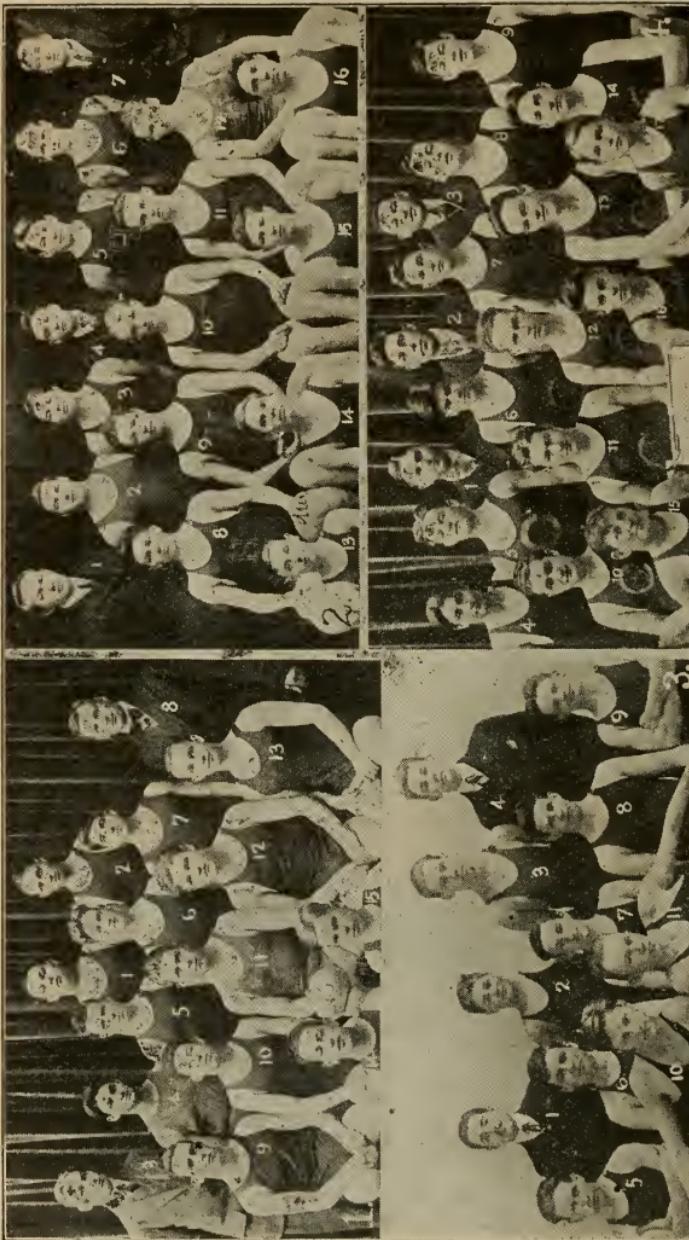
*Compiled by Frank J. Sullivan, Coach Princeton University.*

### Season of 1911-12.

AMHERST.		COLLEGE CITY OF	PRINCETON.
18—Columbia .....	35	NEW YORK.	25 —Penn. .... 28
24—Williams .....	29	30½—Columbia . 22½	48 —Cornell . 5
11—Brown .....	43	39 —Cornell .. 14	42 —Columbia . 11
CHICAGO.		5 —Yale .... 48	42½—C. C. N. Y. 10½
16—Wisconsin ....	46	14 —Penn. .... 39	31 —Yale .... 22
13—Illinois .....	45	10½—Princeton . 42½	44 —Northw'n . 26
14—Northwestern ..	44		51 —Illinois ... 34
9—Illinois .....	50		
14—Northwestern ..	44	NAVY.	
CORNELL.		5—Penn. .... 38	
14—C. C. N. Y... 39		18—Columbia .... 26	WILLIAMS.
15—Columbia .....	38		24—Cornell ..... 24
7—Yale .....	46	NORTHWESTERN.	7—Columbia ..... 46
5—Princeton .....	48	44—Chicago .... 14	29—Amherst ..... 24
24—Williams .....	24	28—Wisconsin .... 30	
COLUMBIA.		27—Wisconsin .... 31	WISCONSIN.
22½—C. C. N. Y. 30½		44—Chicago .... 14	46—Chicago ..... 16
11 —Penn. .... 42			30—Northwestern . 28
26 —Navy .... 18		PENNSYLVANIA.	31—Northwestern . 27
11 —Yale .... 42		42—Columbia .... 11	
11 —Princeton.. 42		39—C. C. N. Y... 14	YALE.
35 —Amherst .. 18		38—Navy .... 5	46—Cornell ..... 7
46 —Williams . 7		30—Yale .... 23	42—Columbia ..... 11
		28—Princeton .... 25	48—C. C. N. Y... 5
			23—Penn. .... 30
			22—Princeton ... 31

### Season of 1912-13.

AMHERST.		ILLINOIS.	PRINCETON.
26—Cornell .....	27	52—Chicago .... 6	37—C. C. N. Y.... 16
18—Columbia .....	35	35—Wisconsin .... 23	35—Columbia ..... 18
22—Brown .....	40	34—Princeton .... 27	31—Penn. .... 22
21—Brown .....	41	30—Yale .... 41	19—Yale ..... 34
18—Harvard .....	32		24—Illinois ..... 37
CHICAGO.			
6—Illinois .....	52	NORTHWESTERN.	
13—Northwestern . 45		45—Chicago .... 13	WISCONSIN.
12—Northwestern . 46		35—Wisconsin .... 23	23—Illinois ..... 35
COLLEGE CITY OF		46—Chicago .... 12	23—Northwestern . 35
NEW YORK.		36—Wisconsin .... 22	22—Northwestern . 36
14—Yale .....	39		
16—Princeton .....	37	PENNSYLVANIA.	YALE.
11—Penn. .... 42		42—C. C. N. Y... 11	39—C. C. N. Y... 14
COLUMBIA.		25—McGill Univ.. 28	42—Columbia ..... 11
18—Princeton .... 35		23—Yale .... 30	30—Penn. .... 23
21—Penn. .... 32		32—Columbia .... 21	34—Princeton ..... 19
11—Yale .....	42	22—Princeton .... 31	39—McGill ..... 14
35—Amherst .... 18			48—Harvard ..... 5
			22—Northwestern . 27
			41—Illinois ..... 30



(1) HIGH SCHOOL OF COMMERCE (NEW YORK CITY) SWIMMING TEAM, Winners of Relay Championship (Greater New York); Relay Team (not in picture). Cann, Albanus, Callahan, Wilson—1, Brier; 2, T. Herbert; 3, Smoother, Mgr.; 4, Lowenstein; 5, Dugan; 6, Tonsil; 7, Chauchoin; 8, P. J. E. Rotherham, Coach; 9, Callahan; 10, Galbraith; 11, Cann, Capt.; 12, Albanus; 13, Pettingill; 14, Strasser; 15, Jones. (2) TOWNSEND HARRIS HALL SWIMMING TEAM—1, W. Whyte, Supervisor; 2, Thuor; 3, Englesman; 4, Lieb, Mgr.; 5, Lewis; 6, Phelps; 7, McCor- mack, Coach; 8, Behr; 9, Munson; 10, Crawford, Capt.; 11, Vermilya; 12, Handschuck; 13, Redlich; 14, MacAvoy; 15, Friedlander; 16, Cantrell. (3) STUYVESANT HIGH SCHOOL (NEW YORK CITY) SWIMMING TEAM—1, Shiplev, Fac. Adv.; 2, Bischoff; 3, Garrigus; 4, Kasper, Mgr.; 5, Robinson; 6, Giebel; 7, Lord, Capt.; 8, Hamilton; 9, Cagney; 10, Marschhausen; 11, Kuser. (4) DE WITT CLINTON HIGH SCHOOL (NEW YORK CITY) SWIMMING TEAM—1, Abrams, Mgr.; 2, Hooks, Coach; 3, Herkowitz, Asst. Mgr.; 4, Kesterbaum; 5, Parker; 6, Dublan; 7, L. Polk; 8, McDonald; 9, Wiley; 10, Fields; 11, Zlivitz; 12, Cohen, Capt.; 13, Fitzgibbons; 14, O'Sullivan; 15, Greenman; 16, Liebner; 17, A. Polk.

## Season of 1913-14.

## AMHERST.

33	—Harvard	20
13	—Andover	40
32 2-3	—Brown	31 1-3

## BROWN.

38	—Cornell	15
26½	—Columbia	26½
31 1-3	—Amherst	32 2-3

COLLEGE CITY OF  
NEW YORK.

15	—Penn.	38
13	—Princeton	40
7	—Yale	46
34	—Columbia	19
31	—Williams	22

## COLUMBIA.

19	—C. C. N. Y	34
13	—Penn.	40
9	—Yale	44
26½	—Brown	26½
15	—Princeton	38
15	—Navy	47

## CORNELL.

15	—Brown	38
29	—Harvard	24

## NORTHWESTERN.

39½	—Chicago	18½
43	—Illinois	15
36	—Chicago	22
43	—Wisconsin	15

## PRINCETON.

40	—C. C. N. Y.	13
32	—Penn.	21
38	—Columbia	15
22	—Yale	31
30	—Cincinnati	15

## PENNSYLVANIA.

32	—Princeton	21
40	—Columbia	13
38	—C. C. N. Y.	15
13	—Yale	40

## YALE.

40	—Penn.	13
31	—Princeton	22
44	—Columbia	9
46	—C. C. N. Y.	7

## Season of 1914-15.

## AMHERST.

38	—Cornell	15
40	—Wesleyan	22
22	—Penn.	49
26	—Andover	27
39	—C. C. N. Y.	30

## CORNELL.

15	—Amherst	38
12	—Harvard	41

## CHICAGO.

35	—Illinois	21
28	—Illinois	30
23	—Northwestern	35
36	—Northwestern	22

COLLEGE CITY OF  
NEW YORK.

7	—Yale	46
13	—Princeton	40
19	—Columbia	34
7	—Penn.	46
21	—Harvard	32
30	—Amherst	39

## COLUMBIA.

34	—C. C. N. Y.	19
18	—Yale	35
29	—Princeton	24
20	—Navy	32
33	—Harvard	20
29	—Penn.	24
23	—Yale	30
29	—Penn.	24

## HARVARD.

26	—Worcester	
15	—Andover	38
41	—Cornell	12
20	—Columbia	33
32	—C. C. N. Y.	21
37	—Springfield	
28	—Andover	25
35	—Mass. Inst. of	
39	—Brown	14

## ILLINOIS.

21	—Chicago	35
39	—Wisconsin	19
25	—Cincinnati	27
30	—Chicago	28

## NAVY.

32	—Columbia	20
35	—Princeton	18
33	—Penn.	29

## NORTHWESTERN.

36	—Illinois	22
35	—Chicago	23
36	—Chicago	22
37	—Wisconsin	21

## PENNSYLVANIA.

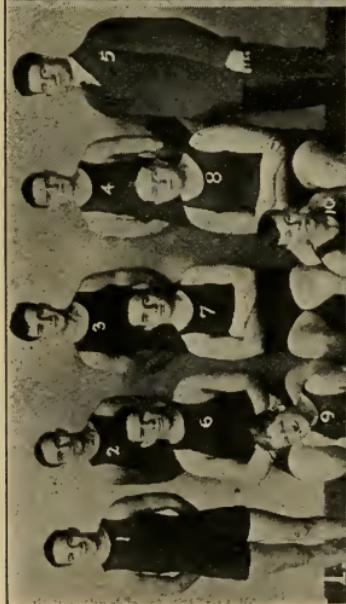
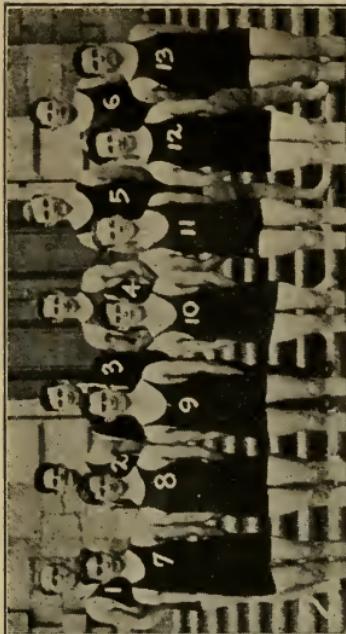
46	—C. C. N. Y.	7
24	—Columbia	29
32	—Yale	21
33	—Princeton	20
28	—Yale	25
24	—Columbia	29
29	—Navy	33
49	—Amherst	22

## PRINCETON.

40	—C. C. N. Y.	13
24	—Columbia	29
20	—Penn.	33
18	—Navy	35
9	—Yale	44
48	—Johns Hopkins	14

## YALE.

46	—C. C. N. Y.	7
35	—Columbia	18
30	—Columbia	23
21	—Penn.	32
25	—Penn.	28
44	—Princeton	9



(1) MONTCLAIR ACADEMY SWIMMING TEAM, 1915-1, Dickson; 2, Baer; 3, Scudder; 4, Taylor; 5, Hazel, Coach; 6, Hazel; 7, Stopnaghain, Capt.; 8, Fulle; 9, Deetjen; 10, Youngman. (2) BALTIMORE POLYTECHNIC INSTITUTE SWIMMING TEAM—1, Morton; 2, Reins; 3, Bolgiano, Mgr. and Coach; 4, Duck, Capt.; 5, Lindsay; 6, Raffle; 7, Roberts; 8, Hall; 9, Grossman; 10, Landin; 11, Neale; 12, Wells; 13, Hambleton. (3) PRINCETON PREPARATORY SCHOOL SWIMMING TEAM—1, E. George; 2, Post; 3, McBreery; 4, C. Georgi; 5, Fallon. (4) ST. PAUL'S SCHOOL (GARDEN CITY, N. Y.) SWIMMING TEAM—1, Burdick, Mgr.; 2, Wardenburg; 3, T. A. Johnson; 4, Hannah; 5, Boyce; 6, Dickens; 7, Smith, Coach; 8, H. D. Johnson; 9, Thomas; 10, Rogers.

## INDIVIDUAL SWIMMING CHAMPIONSHIPS.

*Compiled by Frank J. Sullivan, Coach Princeton University.*

## INTERCOLLEGIATE SWIMMING ASSOCIATION.

### Season of 1911-12.

Held at Weightman Hall, University of Pennsylvania, Philadelphia, March 9, 1912.

50 yards—Won by Shryeck, U. of P.; Cullman, Columbia, second; Ouerbacher, U. of P., third; Schmidt, Yale, fourth. Time, 26 3-5s.

Freshman relay—Won by Yale (Ernst, Mayer, McPhee, Williams); Princeton second. Time, 2m. 55 2-5s.

100 yards—Won by E. Cross, Princeton; Shryock, U. of P., second; Sanville, U. of P., third; Cullman, Columbia, fourth. Time, 61 2-5s.

Fancy diving—Won by Lawrence, Princeton; Stoddard, Yale, second; Myers, Princeton, third; Wilson, Yale, fourth.

Plunge—Won by Willis, U. of P.; Angeny, U. of P., second; Robinson, Princeton, third; Shoemaker, U. of P., fourth. Distance 77ft. 6in.

220 yards—Won by E. Cross, Princeton; Douglass, U. of P., second; Palmer, Yale, third; F. Cross, Princeton, fourth. Time, 2m. 43 4-5s.

### Season of 1912-13.

Held at Brokaw Pool, Princeton University, March 8, 1913.

50 yards—Tie between Summers and Mayer of Yale; Marr, Yale, third. Time, 26 2-5s.

Fancy diving—Won by McAleenan, Yale; Barrett, Columbia, second; Jameson, U. of P., third.

Plunge—Won by Shoemaker, U. of P.; Smith, Yale, second; Robinson, Princeton, third. Distance, 72ft.

100 yards—Won by Cross, Princeton; Roberts, Yale, second; Ouerbacher, U. of P., third. Time, 59 3-5s.

220 yards—Won by Cross, Princeton; Shryock, U. of P., second; Creamer, U. of P., third. Time, 2m. 36 4-5s. (New Intercollegiate record.)

Freshman relay (800 feet)—Won by Princeton (Selby, DeLacy, Smith, O'Sullivan); Pennsylvania, second; Yale, third. Time, 2m. 32s.

### Season of 1913-14.

Held at College City of New York, March 6, 1914.

50 yards—Won by Roberts, Yale; Ouerbacher, U. of P., second; Schlaet, Yale, third. Time, 25 4-5s.

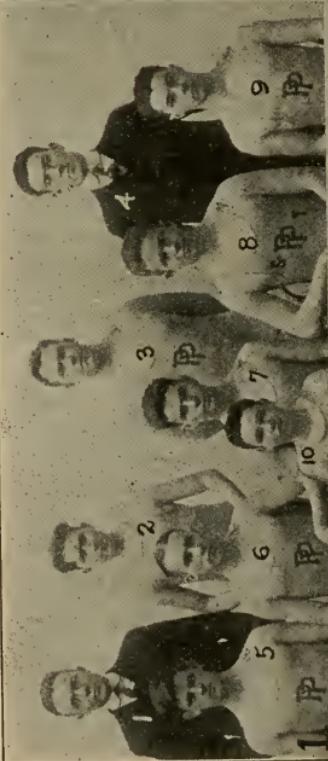
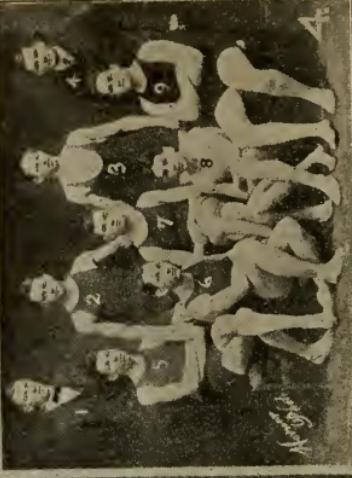
100 yards—Won by Roberts, Yale; Cross, Princeton, second; Mayer, Yale, third. Time, 59 4-5s.

220 yards—Won by Cross, Princeton; Shryock, U. of P., second; Reimer, C. C. N. Y., third. Time, 2m. 37 3-5s.

Plunge—Won by Smith, Yale; Kottek, Columbia, second; Keyes, Yale, third. Distance, 69½ ft.

Fancy diving—Won by McAleenan, Yale; Friesell, Princeton, second; Barrett, Columbia, third.

Freshmen relay (800 feet)—Won by Pennsylvania (Russell, Housen, Masten, Welch); Princeton, second. Time, 2m. 41 3-5s.



(1) POLYTECHNIC PREPARATORY SCHOOL (BROOKLYN, N. Y.) SWIMMING TEAM—1, Reid, Mgr.; 2, Mangan; 3, Remmey; 4, Francis, Coach; 5, J. Shields; 6, Talton; 7, C. Redmond, Capt.; 8, Shields; 9, McDonald; 10, Bernard. (2) UNIVERSITY SCHOOL (BALTIMORE, MD.) SWIMMING TEAM—1, J. Cromwell; 2, K. Hanneman; 3, K. Cromwell; 4, Rowland; 5, Bangier; 6, R. Cromwell; 7, McHenry, Capt.; 8, Kirk; 9, Gottman; 10, Grindry. (3) ST. JOHN'S COLLEGE (BROOKLYN, N. Y.) PREP SWIMMING TEAM—1, L. L. McIntyre, Trainer; 2, Evers; 3, Cotter; 4, Count; 5, Salmon, Captain; 6, Mullholland; 7, Brown; 8, Sullivan, Mgr. (4) HUNTINGTON (MASS.) SCHOOL SWIMMING TEAM—1, Ogden, Mgr.; 2, Jackson; 3, Marling; 4, Sexton, Coach; 5, Pierce; 6, Skinner; 7, Fitzgerald, Capt.; 8, Hagan; 9, Harper.

### Season of 1914-15.

Held at Carnegie Pool, New Haven, March 5, 1915.

50 yards—Won by Hoadley, Yale; Shryock, U. of P., second; Schlaet, Yale, third. Time, 26 1-5s.

100 yards—Won by Vollmer, Columbia; Shryock, U. of P., second; Hoadley, Yale, third. Time, 58 1-5s.

220 yards—Won by Vollmer, Columbia; Shryock, U. of P., second; Ferguson, Yale, third. Time, 2m. 32 4-5s.

Plunge—Won by Shoemaker, U. of P.; Smith, Yale, second; Lehman, U. of P., third. Distance, 69ft. 8in.

Fancy diving—Won by McAleenan, Yale; Friesell, Princeton, second; Brereton, Princeton, third.

**INTERCOLLEGIATE CONFERENCE CHAMPIONSHIP  
SWIMMING MEETS.**

1910-11—Illinois 30, Chicago 17, Northwestern 17, Wisconsin 17.

1911-12—Illinois 38, Northwestern 21, Wisconsin 18, Chicago 9.

1912-13—Illinois 37, Wisconsin 27, Northwestern 21, Chicago 2.

1913-14—Northwestern 29, Illinois 28, Chicago 22, Wisconsin 6.  
1914-15—Northwestern 27, Chicago 22, Illinois 17, Wisconsin 13.

1914-15—Northwestern 37, Chicago 22, Illinois 17, Wisconsin 12.

## RESULTS OF NEW ENGLAND TRIANGULAR MEETS.

1910—Brown 30, Amherst 24, Williams 22.

1911—Amherst 26, Williams 26, Brown 23.

1912—Brown 40½, Amherst 23, Williams 12½.

1913—Brown 44½, Amherst 15, Williams 11½.  
1914—Amherst 38, Brown 38, Williams 5.

1914—Amherst 38, Brown 28, Williams 5.  
1915 No meet held.

1915—No meet held.

## RESULTS OF WATER POLO GAMES.

*Compiled by Frank J. Sullivan, Coach Princeton University.*

## Season of 1911-12.

CHICAGO.		CORNELL.		PRINCETON.	
0—Wisconsin	10	5—Columbia	5	45—Columbia	0
0—Illinois	1	0—Princeton	70	50—C. C. N. Y.	0
0—Illinois	1	2—Yale	25	70—Cornell	0
COLLEGE CITY OF NEW YORK.		ILLINOIS.		30—Penn.	
5—Yale	45	1—Chicago (d)	0	30—Yale	0
0—Princeton	50	1—Chicago (d)	0	7—Northwestern	0
10—Penn.	0	32—Northwestern	0	3—Illinois	1
NORTHWESTERN.		WISCONSIN.		WISCONSIN.	
0—Wisconsin	5	0—Illinois	32	10—Chicago	0
0—Illinois	32	0—Illinois	32	5—Northwestern	0
COLUMBIA.		PENNSYLVANIA.		YALE.	
5—Cornell	5	30—Columbia	0	25—Cornell	2
0—Penn.	30	5—Princeton	30	45—C. C. N. Y.	5
0—Yale	20	5—Yale	20	20—Columbia	0
0—Princeton	45	0—C. C. N. Y.	10	20—Penn.	5
				0—Princeton	30

**Season of 1912-13.**

COLLEGE CITY OF NEW YORK.	PENNSYLVANIA.	YALE.
0—Yale .....	40—C. C. N. Y... 0	20—C. C. N. Y.... 0
0—Princeton .... 85	10—Yale ..... 20	20—Penn. ..... 10
0—Penn. .... 40	15—Columbia ..... 0	20—Princeton .... 35
	10—Princeton .... 40	

**PRINCETON.**

COLUMBIA.	PRINCETON.
15—Princeton .... 30	85—C. C. N. Y... 0
0—Penn. .... 15	30—Columbia ..... 15
	35—Yale ..... 20
	40—Penn. ..... 10
	3—Illinois ..... 1

**Season of 1913-14.**

COLLEGE CITY OF NEW YORK.	PENNSYLVANIA.	YALE.
6—Penn. .... 46	46—C. C. N. Y.... 6	50—C. C. N. Y.... 8
0—Princeton .... 92	22—Columbia ..... 24	33—Penn. ..... 2
8—Yale ..... 50	20—Princeton .... 41	24—Princeton .... 29
	2—Yale ..... 33	

**PRINCETON.**

COLUMBIA.	PRINCETON.
24—Penn. .... 22	92—C. C. N. Y.... 9
3—Princeton .... 39	39—Columbia ..... 3
	41—Penn. ..... 20
	29—Yale ..... 24

**Season of 1914-15.**

COLLEGE CITY OF NEW YORK.	NAVY.	PRINCETON.
5—Yale ..... 45	36—Univ. of Pitts.. 17	73—C. C. N. Y.... 0
0—Princeton .... 73	33—Penn. ..... 29	20—Columbia ..... 10
3—Columbia ..... 31	56—Johns Hopkins. 6	40—Penn. ..... 15
0—Penn. .... 25	33—Columbia ..... 20	20—Yale ..... 15
	44—C. C. N. Y.... 18	35—Johns Hopkins. 0
	35—Princeton .... 18	

COLUMBIA.	PENNSYLVANIA.	YALE.
31—C. C. N. Y.... 3	25—C. C. N. Y.... 0	45—C. C. N. Y.... 5
0—Yale ..... 15	10—Columbia ..... 15	15—Columbia ..... 6
10—Princeton .... 20	15—Princeton .... 40	25—Penn. ..... 11
15—Penn. .... 10	11—Yale ..... 25	15—Princeton .... 20

**EASTERN INTERCOLLEGIATE SWIMMING LEAGUE.**

*Compiled by Frank J. Sullivan, Coach Princeton University.*

**Season of 1911-12.**

SWIMMING.	WON.	LOST.	P.C.	WON.	LOST.	TIED.	P.C.
Pennsylvania .....	5	0	1.000	Princeton .....	5	0	0
Princeton .....	4	1	.800	Yale .....	4	1	0
Yale .....	3	2	.600	Pennsylvania .....	3	2	0
C. C. N. Y.....	2	3	.400	C. C. N. Y.. 2	3	0	.400
Columbia .....	1	4	.200	Columbia .....	0	4	1
Cornell .....	0	5	.000	Cornell .....	0	4	.100

**Season of 1912-13.**

SWIMMING.				WATER POLO.			
Teams.	Won.	Lost.	P.C.	Teams.	Won.	Lost.	P.C.
Yale .....	4	0	1.000	Princeton .....	4	0	1.000
Princeton .....	3	1	.750	Yale .....	3	1	.750
Pennsylvania .....	2	2	.500	Pennsylvania .....	2	2	.500
Columbia .....	1	3	.250	Columbia .....	1	3	.250
C. C. N. Y. ....	0	4	.000	C. C. N. Y. ....	0	4	.000

**Season of 1913-14.**

SWIMMING.				WATER POLO.			
Teams.	Won.	Lost.	P.C.	Teams.	Won.	Lost.	P.C.
Yale .....	4	0	1.000	Princeton .....	4	0	1.000
Princeton .....	3	1	.750	Yale .....	3	1	.750
Pennsylvania .....	2	2	.500	Columbia .....	2	2	.500
C. C. N. Y. ....	1	3	.250	Pennsylvania .....	1	3	.250
Columbia .....	0	4	.000	C. C. N. Y. ....	0	4	.000

**Season of 1914-15.**

SWIMMING.				WATER POLO.			
Teams.	Won.	Lost.	P.C.	Teams.	Won.	Lost.	P.C.
Yale .....	4	2	.666	Princeton .....	4	0	1.000
Columbia .....	4	2	.666	Yale .....	3	1	.750
Pennsylvania .....	4	2	.666	Columbia .....	2	2	.500
Princeton .....	1	3	.250	Pennsylvania .....	1	3	.250
C. C. N. Y. ....	0	4	.000	C. C. N. Y. ....	0	4	.000

**INTERSCHOLASTIC EVENTS.****University of Pennsylvania Twelfth Interscholastic Championships.**

Held March 13, 1915.

*Compiled by George Kistler, Coach of Swimming University of Pennsylvania.*

50 yards—Won by George H. Kistler, West Philadelphia H. S.; C. Shields, Poly Prep, second; C. L. Drasher, West Philadelphia H. S., third; G. T. Tibbets, Mercersburg, fourth. Time, 27 2-5s.

100 yards—Won by C. L. Drasher, West Philadelphia H. S.; R. Reilly, Atlantic City H. S., second; G. H. Kistler, West Philadelphia H. S., third. Time, 1m. 2 4-5s.

Plunge—Won by L. R. Kinnard, Haverford, 63ft.; W. Dryzmalla, West Philadelphia H. S., 62ft., second; A. C. Van Roden, Central H. S. of Philadelphia, 58ft., third.

500 yards—Won by T. S. Luke, Lawrenceville, 6m. 49s.; Dippy, Central H. S. of Philadelphia, 6m. 50s., second.

Fancy diving—Won by G. H. Kistler, West Philadelphia H. S.

800 foot relay—Won by West Philadelphia H. S. (J. E. Allen, N. J. Green, C. L. Drasher, G. H. Kistler); Lawrenceville (H. S. McGaffney, T. S. Luke, J. S. Davidson, N. C. Franzheim), second; Central H. S. of Philadelphia (Dippy, Fowler, Leopold, DeLong), third. Time, 2m. 37 1-5s.

## Princeton Interscholastic Championships.

*Compiled by Frank J. Sullivan, Coach Princeton University.*

First Annual Meet, held February 15, 1913.

50 yards—Won by R. W. Bennett, St. Paul's School; H. C. Franzheim, Lawrenceville, second; D. J. Suttle, Princeton Prep, third. Time, 26s.

Plunge—Won by A. E. Norris, Lawrenceville; L. Schwartz, DeWitt Clinton, second; C. B. Taylor, Mercersburg, third. Distance, 62½ ft.

Fancy diving—Won by D. J. Suttle, Princeton Prep; F. Jouannett, Brookline (Mass.) H. S., second; W. E. Gerber, Lawrenceville, third.

100 yards—Won by R. W. Bennett, St. Paul's School; J. C. Eddy, Poly Prep, second; D. J. Suttle, Princeton Prep, third. Time, 62s.

220 yards—Won by Leo Handy, Brookline (Mass.) H. S.; A. Clyburn, Erasmus Hall, second; H. Latz, Atlantic City H. S., third. Time, 2m. 53 4-5s.

Relay race (800 feet)—Won by Lawrenceville (Ames, McKelvey, Stevenson, Sternbach); Erasmus Hall, second; DeWitt Clinton, third. Time, 2m. 44 2-5s.

Second Annual Meet, held February 28, 1914.

50 yards—Won by Herbert, Horace Mann; Vollmer, Stuyvesant, second; Handy, Brookline, third. Time, 26 1-5s. (New record.)

Plunge—Won by Wales, Brookline; Flowers, Horace Mann, second; Heyer, Morris High, third. Distance, 70ft. (New record.)

Fancy diving—Won by Jouannett, Brookline (Mass.) H. S.; O'Sullivan, Princeton Prep, second; Mark, Mercersburg, third.

100 yards—Won by Vollmer, Stuyvesant; Tomlinson, Philadelphia Central H. S., second; Cann, Commerce H. S., third. Time, 61 4-5s.

220 yards—Won by Handy, Brookline (Mass.) H. S.; Tomlinson, Philadelphia Central H. S., second; Dippy, Philadelphia Central H. S., third. Time, 2m. 52 2-5s.

Relay race (800 feet)—Won by Brookline (Mass.) H. S. (Prendergast, Cardin, Untersee, Handy); DeWitt Clinton H. S., second; Erasmus Hall, third. Time, 2m. 39 4-5s. (New record.)

Third Annual Meet, held February 12, 1915.

50 yards—Won by Dean, Mechanic Arts H. S., Boston; Prendergast, Brookline (Mass.) H. S., second; Untersee, Brookline (Mass.) H. S., third. Time, 26 4-5s. In semi-final Dean made new record of 25 4-5s.

Plunge—Won by Wales, Brookline (Mass.) H. S.; Bird, Brookline (Mass.) H. S., second; Dryzmalla, West Philadelphia H. S., third. Distance, 71ft. 6in. (New record.)

Fancy diving—Won by Bullen, Lawrenceville; Galbreath, Commerce H. S., second; Davidson, Lawrenceville, third.

220 yards—Won by Handy, Brookline (Mass.) H. S.; Marling, Huntington School, Boston, second; Tomlinson, Brown Prep, third. Time, 2m. 36 4-5s. (New record.)

100 yards—Won by Handy, Brookline (Mass.) H. S.; Shields, Mercersburg, and Reilly, Winchester Prep, tied for second. Time, 62s.

Relay race (600 feet)—Won by Brookline (Mass.) H. S. (Handy, Prendergast, McKinnon, Untersee); Central H. S. of Philadelphia, second; Poly Prep, Brooklyn, third. Time, 1m. 48s. (New record.)

## EASTERN INTERCOLLEGIATE SWIMMING RECORDS.

*Compiled by Frank J. Sullivan, Coach Princeton University.*

- 50 yards, 25 1-5s. (75 foot pool, 1 turn)—Sheldon E. Hoadley, Yale, Carnegie Pool, New Haven, Dec. 11, 1914.  
 100 yards, 58s. (75 foot pool, 3 turns)—Herbert Vollmer, Columbia, Brokaw Pool, Princeton, Apr. 17, 1915.  
 220 yards, 2m. 31s. (100 foot pool, 5 turns)—Eben J. D. Cross, Princeton, Brokaw Pool, Princeton, Feb. 20, 1914.  
 Plunge, 77ft. 6in. (1 minute time limit)—F. B. Willis, Pennsylvania Weightman Hall Pool, Philadelphia, Mar. 9, 1912.  
 800 foot relay, 2m. 30s.—Yale team (Summers, Marr, Mayer, Roberts), Brokaw Pool, Princeton, Feb. 27, 1914.  
 200 yard relay, 1m. 45s.—Yale team (Mayer, Summers, Marr, Schlaet), Carnegie Pool, New Haven, Jan. 16, 1914.
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## WESTERN INTERCOLLEGIATE SWIMMING RECORDS

*Compiled by Coach Thomas Robinson, Northwestern University.*

- Plunge for distance, 60ft. (23 3-5s.)—McDonald, Illinois.  
 40 yard swim, 20s.—Huszagh, Northwestern.  
 100 yard swim, 58 4-5s.—Huszagh, Northwestern.  
 220 yard swim, 2m. 40s.—Huszagh, Northwestern.  
 160 yard relay, 1m. 22 4-5s.—Northwestern University.  
 200 yard breast stroke, 2m. 45 2-5s.—Taylor, Wisconsin.  
 150 yard back stroke, 1m. 57 2-5s.—Pavlicek, Chicago.
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## SWIMMING RECORDS OF WESTERN INTER-COLLEGiate CONFERENCE.

*Compiled by Coach Thomas Robinson, Northwestern University.*  
 (Conference records can only be made or broken at the time of the "Big Nine" meeting each spring.)

- Plunge for distance, 60f. (23 3-5s.)—McDonald, Illinois.  
 40 yard swim, 20 2-5s.—Johnson, Northwestern.  
 100 yard swim, 59 1-5s.—Johnson, Northwestern.  
 220 yard swim, 2m. 40 2-5s.—Johnson, Northwestern.  
 160 yard relay, 1m. 25s.—Northwestern University.  
 200 yard breast stroke, 2m. 46s.—Taylor, Wisconsin.  
 150 yard back stroke—1m. 58 3-5s.—Pavlicek, Chicago.  
 Water basket ball—Northwestern University champions for 1914 and 1915. Other institutions in order both years: Second, Illinois; third, Chicago; fourth, Wisconsin.
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## EASTERN INTERSCHOLASTIC SWIMMING RECORDS.

*Compiled by Frank J. Sullivan, Coach Princeton University.*

- 50 yards, 25 4-5s.—Russell Dean, Mechanic Arts H. S., Boston, Princeton Interscholastic Championships, Brokaw Pool, Princeton, Feb. 13, 1915.  
 100 yards, 59 2-5s.—Leo Handy, Brookline (Mass.) H. S., Princeton Interscholastic Championships, Brokaw Pool, Princeton, Feb. 13, 1915.

220 yards, 2m. 36 4-5s.—Leo Handy, Brookline (Mass.) H. S., Princeton Interscholastic Championships, Brokaw Pool, Princeton, Feb. 13, 1915.

Plunge, 71ft. 6in.—Arthur Wales, Brookline (Mass.) H. S., Princeton Interscholastic Championships, Brokaw Pool, Princeton, Feb. 13, 1915.

200 yard relay, 1m. 48s. flat—Brookline (Mass.) H. S. team (Handy, Untersee, Prendergast, McKinnon), Princeton Interscholastic Championships, Brokaw Pool, Princeton, Feb. 13, 1915.

800 foot relay, 2m. 37 1-5s.—West Philadelphia H. S. (Allen, Green, Drasher, Kistler), Pennsylvania Interscholastic Championships, Weightman Pool, Philadelphia, March 13, 1915.

## WESTERN INTERSCHOLASTIC SWIMMING RECORDS.

*Compiled by J. H. White, Coach University of Chicago.*

Plunge—R. White, University H. S., 60f. 29 4-5s.

40 yard swim—K. Huszagh, Lewis Institute, 19 3-5s.

100 yard breast stroke—Vacin, University H. S., 1m. 14 4-5s.

100 yard swim—K. Huszagh, Lewis Institute, 58s.

40 yard back stroke—T. Pope, New Trier H. S., 26 1-5s.

60 yard back stroke—M. Mott, Oak Park H. S., 40 3-5.s.

100 yard back stroke—M. Mott, Oak Park H. S., 1m. 15 2-5s.

220 yard swim—M. Mott, Oak Park H. S., 2m. 38 4-5s.

160 yard relay—Oak Park H. S. (E. Royal, M. Royal, Steele, Mott), 1m. 25 2-5s.

240 yard relay—Oak Park H. S. (E. Royal, M. Royal, Steele, Mott, Hales, Grace), 2m. 12 2-5s.

## UNIVERSITY OF PENNSYLVANIA INTERSCHOLASTIC RECORDS.

50 yards, 26 4-5s.—Herbert, Horace Mann School, April 24, 1914.

100 yards, 62 2-5s.—Eddy, Brooklyn Polytechnic, made in 1912.

Plunge, 68ft.—Hotchkiss, Lawrenceville, 1912.

500 yards, 6m. 49s.—T. S. Luke, Lawrenceville, Mar. 13, 1915.

800 foot relay, 2m. 37 1-5s.—West Philadelphia H. S. (J. E. Allen, N. J. Green, C. L. Drasher, G. H. Kistler), Mar. 13, 1915.

## PRINCETON INTERSCHOLASTIC SWIMMING RECORDS.

*Compiled by Frank J. Sullivan, Coach Princeton University.*

50 yards, 25 4-5s.—Russell Dean, Mechanic Arts H. S., Boston, Princeton Interscholastic Championships, Brokaw Pool, Feb. 13, 1915.

100 yards, 59 2-5s.—Leo Handy, Brookline (Mass.) H. S., Princeton Interscholastic Championships, Brokaw Pool, Princeton, Feb. 13, 1915.

220 yards, 2m. 36 4-5s.—Leo Handy, Brookline (Mass.) H. S., Princeton Interscholastic Championships, Brokaw Pool, Feb. 13, 1915.

Plunge, 71ft. 6in.—Arthur Wales, Brookline (Mass.) H. S., Princeton Interscholastic Championships, Brokaw Pool, Feb. 13, 1915.

200 yard relay, 1m. 48s. flat—Brookline (Mass.) H. S. team (Handy, Untersee, Prendergast, McKinnon), Princeton Interscholastic Championships, Prokaw Pool, Feb. 13, 1915.

800 foot relay, 2m. 39 4-5s.—Brookline (Mass.) H. S. team (Prendergast, Cardin, Untersee, Handy), Princeton Interscholastic Championships, Brokaw Pool, Princeton, Mar. 2, 1914.

## NEW YORK CITY HIGH SCHOOLS INDOOR SWIMMING RECORDS.

- Tub race (20 yards), 17 2-5s.—Guiteras, H. S. of Commerce, Feb. 26, 1907.  
 50 yards, 27s.—H. Vollmer, Stuyvesant H. S., Mar. 13, 1913.  
 75 yards, 57 3-5s.—M. Thompson, H. S. of Commerce, Feb. 26, 1908.  
 100 yards, 1m. 2 1-5s.—T. Cann, H. S. of Commerce, Mar. 12, 1915.  
 200 yards, 2m. 49 1-5s.—H. W. Rogers, Townsend-Harris Hall, Mar. 11, 1910.  
 220 yards swim, 2m. 46 3-5s.—W. O'Sullivan, DeWitt Clinton H. S., Mar. 12, 1915.  
 Relay race (160 yds.), 1m. 47 4-5s.—H. S. of Commerce (O'Neill, H. Greenwald, J. Boyle, M. Thompson), Feb. 26, 1907.  
 Relay race (200 yds.), 2m. 13 2-5s.—H. S. of Commerce (Rohes, Purcell, Kernal, Thompson), Feb. 27, 1909.  
 Relay race (266 yds.), 3m. 2s.—DeWitt Clinton H. S. (Richards, McAuliffe, Moore, Hanratti), Mar. 11, 1910.  
 Relay race (800ft.), 2m. 47 4-5s.—H. S. of Commerce (A. Callahan, L. Wilson, K. Albanus, T. Cann), Mar. 12, 1915.  
 Plunge for distance (69ft. 6in).—L. Giebel, Stuyvesant H. S., March 12, 1915.
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## NEW YORK CITY ELEMENTARY SCHOOLS INDOOR SWIMMING RECORDS.

- 20 yards (80 lb. class), 12 4-5s.—J. Fulton, P. S. 67, Manhattan, April 17, 1909.  
 20 yards (85 lb. class), 11 3-5s.—J. Nerich, P. S. 87, Manhattan, April 23, 1910.  
 40 yards (95 lb. class), 29 4-5s.—S. Lothian, P. S. 58, Manhattan, April 17, 1909.  
 40 yards (100 lb. class), 24s.—J. Watt, Jr., P. S. 9, Brooklyn, April 17, 1915.  
 60 yards (115 lb. class), 38s.—Forrester, P. S. 10, Manhattan, April 17, 1915.  
 80 yards (unlimited weight class), 53 3-5s.—J. Nerich, P. S. 87, Manhattan, April 20, 1912.  
 160 yards relay (unlimited weight class), 1m. 51 1-5s.—P. S. 11, Brooklyn (R. Hanford, J. Cook, C. Savage, F. Titus), April 22, 1911.
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## NEW YORK CITY ELEMENTARY SCHOOLS OUTDOOR SWIMMING RECORDS.

- 20 yards, 17 3-5s.—H. Slifka, P. S. 10, Manhattan, July 1, 1911.  
 40 yards, 35 2-5s.—A. Morr, P. S. 40, Manhattan, July 1, 1911.  
 60 yards, 52 1-5s.—D. McCann, P. S. 163, Brooklyn, July 1, 1911.  
 80 yards, 1m. 26 4-5s.—J. Agid, P. S. 160, Manhattan, July 1, 1911.  
 Relay (160 yards), 3m. 16 4-5s.—P. S. 128, Brooklyn (H. Lawson, F. Fay, F. LaDoice, L. Lake), July 1, 1911.
- 

## SAN FRANCISCO ELEMENTARY SCHOOLS INDOOR SWIMMING RECORDS, 1915.

- |                                  |                               |
|----------------------------------|-------------------------------|
| 20 yards, 11 2-5s.—H. Schofield. | 60 yards, 37 1-5s.—L. Helman. |
| 40 yards, 27 1-5s.—R. Clampett.  | 80 yards, 52s.—R. Jorgensen.  |

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GUARANTEES  
QUALITY

# Spalding Two Piece Bathing Suits

ALL STYLES FURNISHED IN SIZES 28 TO 46 INCHES CHEST MEASUREMENT.  
CHANGE POCKET IN TRUNKS OF ALL SPALDING SUITS.

No. 115. Sleeveless, extra quality fashioned worsted, with attractive striping, solid colors and mixtures, on skirt of shirt and bottoms of tights in following colors: Black trimmed Gray, Brown and White stripe; Iron Gray, White and Black stripe; Navy trimmed Maroon, Cardinal and White Stripe. Suit, \$6.00 ★ \$64.80 Doz.



No. 115



No. 111

No. 614. Sleeveless, fine quality worsted, striping on shirt and tights in following colors only: Black with Cardinal and White striping; Navy with Gray and White striping; Gray with Navy and Cardinal striping; Iron Gray with White and Black striping. Suit, \$3.50 ★ \$37.80 Doz.

The prices printed in italics opposite items marked with ★ will be quoted only on orders for one-half dozen or more. Quantity prices NOT allowed on items NOT marked with ★

No. 111. Quarter sleeve, striped worsted, full fashioned, best quality, in following colors only: Gray trimmed White; Black trimmed Cardinal; Navy trimmed White. Suit, \$5.00 ★ \$54.00 Dz.

No. 110. Sleeveless, worsted, full fashioned, best quality. Plain colors only: Navy, Black or Iron Gray. Suit, \$5.00 ★ \$54.00 Doz.



No. 614

PROMPT ATTENTION GIVEN TO  
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A. G. SPALDING & BROS.  
STORES IN ALL LARGE CITIES

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Prices in effect July 5, 1915 Subject to change without notice. For Canadian prices see special Canadian Catalogue.

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# Spalding Two Piece Bathing Suits

ALL STYLES FURNISHED IN SIZES 28 TO 46 INCHES CHEST MEASUREMENT.  
CHANGE POCKET IN TRUNKS OF ALL SPALDING SUITS.

**No. 100PC.** Pacific Coast style; that is, one piece, but with skirt which cannot be tucked inside of tights. Sleeveless, striped worsted, full fashioned, best quality. In following colors only: Gray trimmed Navy; Navy trimmed Cardinal; Navy trimmed White. Suit, \$3.50 ★ \$37.80 Doz.



No. 600F

**No. 600F.** Consisting of sleeveless, fine quality worsted shirt with stripe around chest; Navy and White, Navy and Red, and Gray and Cardinal; good quality Gray or Navy flannel knee pants. Flannel pants dry quickly. Special white canvas bathing belt. Suit, \$3.50 ★ \$37.80 Doz.



No. 100PC



No. 195

**No. 109.** Sleeveless, fine quality worsted, solid colors only, either Black, Navy Blue or Heather Mixture. Suit, \$3.50 ★ \$37.80 Doz.

**No. 195.** Sleeveless, fancy worsted, with attractive striping on shirt and tights in following colors: Gray trimmed White; Navy trimmed White; Black trimmed Red; Gray trimmed Navy.

Suit, \$3.50 ★ \$37.80 Doz.

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# Spalding Two Piece Bathing Suits

ALL STYLES FURNISHED IN SIZES 28 TO 46 INCHES CHEST MEASUREMENT.  
CHANGE POCKET IN TRUNKS OF ALL SPALDING SUITS

No. 600BS. Sleeveless, fine quality cut worsted with fancy striping on shirt and tights in following colors: Navy trimmed White; Black trimmed Red; Black trimmed Green.

Suit, \$3.00 ★ \$32.40 Doz.

No. 600. Sleeveless, fine quality cut worsted, furnished in plain colors only; Navy, Black or Gray.

Suit, \$2.50 ★ \$27.00 Doz.



No. 600PCS

No. 600PC. This suit is made in what is known as the Pacific Coast style, all in one piece, but with skirt which cannot be tucked inside of tights. Sleeveless, fine quality cut worsted in plain colors only, either Navy, Black, Gray or Maroon.

Suit, \$2.50 ★ \$27.00 Doz.

The prices printed in italics opposite items marked with ★ will be quoted only on orders for one-half dozen or more. Quantity prices NOT allowed on items NOT marked with ★



No. 600BS

No. 600PCS. Pacific Coast style, that is, one piece, but with skirt which cannot be tucked inside of tights. Sleeveless, striped cut worsted, in following colors: Navy trimmed White; Black trimmed Red; Dark Gray trimmed White.

Suit, \$3.00 ★ \$32.40 Doz.

No. 601. Quarter sleeve, fine quality cut worsted in plain Navy, Black, and Maroon.

Suit, \$3.00 ★ \$32.40 Doz.



No. 600PC

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# Spalding Two Piece Bathing Suits

ALL STYLES  
FURNISHED IN  
SIZES 28 TO 46  
INCHES CHEST  
MEASUREMENT

No. 200. Sleeveless,  
three-quarters worsted.  
Main colors only, Navy  
or Black.  
Suit, \$2.00★\$21.60 Doz.



No. P2S



No. 28

No. P2S. Pacific Coast style,  
finest quality cotton, trimmed  
shirt and tights. Colors: Navy  
and Red or Navy and White  
only.

Suit, \$1.50★\$16.20 Doz.

No. 606. Sleeveless, cotton, in  
Navy Blue, with either Red or  
White trimmings on shirt and  
tights. Suit, \$1.00★\$10.80 Dz.

No. 605. Sleeveless, cotton,  
Navy Blue.

Suit, 75c.★\$8.10 Doz.



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Shirt of  
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**Patent Combination Swimming Suit**  
No. 3R. Best quality worsted, in solid color only, either plain Black, plain Navy Blue or plain Gray. Shirt has combination supporter. Arm holes extra large and shirt fastens to trunks at side with invisible catches, making a tight fitting, neat combination. White canvas belt, with adjustable buckle, forms part of trunks, no drawing tape to knot or break. Pocket for change, etc., inside of trunks. Furnished in regular length and extra long. Suit, \$5.00



No. 2S

**Expert Racing and Swimming Suits**  
No. 2S. Men's. Good quality silk one-piece suit. Navy Blue or Black. Buttons over shoulders. Suit, \$3.50 ★ \$37.80 Doz.  
No. 2SL. Women's. Otherwise same as No. 2S. Suit, \$3.50 ★ \$37.80 Doz.  
No. 4R. Fine quality worsted. Made in plain Navy Blue or plain Black. Buttons over shoulders. Suit, \$3.00 ★ \$32.40 Doz.  
No. 2R. Mercerized cotton, silky finish. Plain Black or Navy Blue. Buttons over shoulders. Suit, \$2.00 ★ \$21.60 Doz.  
No. 1R. Men's. Cotton. Plain Black or Navy Blue. Snug fitting. Buttons over shoulders. Suit, \$1.00 ★ \$10.80 Doz.  
No. 1RL. Women's. Same as No. 1R. Supplied also in Gray. Suit, \$1.00 ★ \$10.80 Doz.

**Spalding One-Piece Bathing Suits**

No. 50. Sleeveless, cotton. Solid Navy Blue. Button at shoulders. . . Suit, 75c. ★ \$8.40 Doz.  
No. 743. Men's sizes, 32 to 44 inch chest; fancy stripes; button in front. . . . Suit, 75c. ★ \$8.10 Doz.  
No. 521B. Boys' sizes, 24 to 32 inch chest; fancy stripes; button in front. . . . Suit, 50c. ★ \$5.40 Doz.

**Flannel Bathing Knee Pants**

No. F. Good quality Gray or Navy flannel knee pants; fly front; belt loops. Loose fitting and just the thing for those who dislike bathing tights. Dry quickly. . . Pair, \$2.00

**Spalding Worsted Bathing Trunks**

No. 1. Worsted, full fashioned, best quality, in Navy, Black, and Maroon.

Pair, \$2.00 ★ \$21.60 Doz.

No. 2. Cut worsted, in Navy, and Black. . . Pair, \$1.00 ★ \$10.80 Doz.

**Cotton Bathing Trunks**

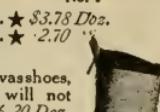
No. 601. Navy Blue; Red or White stripes. . . Pair, 50c. ★ \$5.40 Doz.

No. 602. Solid Navy Blue. Pair, 35c. ★ \$3.78 Doz.

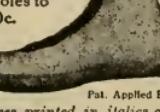
No. 603. Fancy stripes. . . 25c. ★ 2.70



No. 1



No. 2



No. 13

No. FL

Pat. Applied For

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**Spalding Water Polo Balls**

No. LC. Special leather cover water polo ball. This style is used in games under official rules. Ea., \$6.00  
No. 1. White rubber fabric. Inflated, with key. Regulation size. Ea., \$2.00

**Official Water Polo Goal Nets**

Made in accordance with official rules. . . . . Pair, \$10.00 No. LC



**Official Association Water Polo Cap**  
No. WPC. Used to distinguish swimmers in match races, and to pick out easily players on opposing teams in water polo games, the caps being made in a variety of colors.  
Each, \$1.00



No. WPC



No. S

No. DSC. White duck skull cap, tape bound; ventilated. . . . Each, 25c.



No. DSC

**Spalding Bathing Suit Bags**



No. 1. Bag closed.

No. 1. Bag, for one suit. Blue mackintosh material, waterproof; braid bound; glove clasp fasteners. Handle for carrying at top. Supplied in medium and large sizes. Ea., 50c.  
No. 2. Bag, for two suits. Special design adjustable roll effect. Blue mackintosh material, waterproof; braid bound; glove clasp snap fasteners. Handle at side for carrying. Supplied in medium and large sizes. . . . Each, \$1.00



No. 2. Bag closed.



No. 1. Bag open.  
Note extra inside flap.



No. 2. Bag open.  
Note ample size and convenient shape.

**Canvas Bathing Belt**

No. C. Made of white canvas, with metal buckle. Each, 50c.

**Ayvad's Water Wings**

No. 1. Plain white. Ea., 25c. No. 2. Variegated colors. Ea., 35c.  
The prices printed in italics opposite items marked with ★ will be quoted only on orders for one-half dozen or more. Quantity prices NOT allowed on items NOT marked with ★

# STANDARD QUALITY

An article that is universally given the appellation "Standard" is thereby conceded to be the Criterion, to which are compared all other things of a similar nature. For instance, the Gold Dollar of the United States is the Standard unit of currency, because it must legally contain a specific proportion of pure gold, and the fact of its being Genuine is guaranteed by the Government Stamp thereon. As a protection to the users of this currency against counterfeiting and other tricks, considerable money is expended in maintaining a Secret Service Bureau of Experts. Under the law, citizen manufacturers must depend to a great extent upon Trade-Marks and similar devices to protect themselves against counterfeit products—without the aid of "Government Detectives" or "Public Opinion" to assist them.

Consequently the "Consumer's Protection" against misrepresentation and "inferior quality" rests entirely upon the integrity and responsibility of the "Manufacturer."

A. G. Spalding & Bros. have, by their rigorous attention to "Quality," for forty years, caused their Trade-Mark to become known throughout the world as a Guarantee of Quality as dependable in their field as the U. S. Currency is in its field.

The necessity of upholding the guarantee of the Spalding Trade-Mark and maintaining the Standard Quality of their Athletic Goods, is, therefore, as obvious as is the necessity of the Government in maintaining a Standard Currency.

Thus each consumer is not only insuring himself but also protecting other consumers when he assorts a Reliable Manufacturer, in upholding his Trade-Mark and all that it stands for. Therefore, we urge all users of our Athletic Goods to assist us in maintaining the Spalding Standard of Excellence, by insisting that our Trade-Mark be plainly stamped on all athletic goods which they buy, because without this precaution our best efforts towards maintaining Standard Quality and preventing fraudulent substitution will be ineffectual.

Manufacturers of Standard Articles invariably suffer the reputation of being high-priced, and this sentiment is fostered and emphasized by makers of "inferior goods," with whom low prices are the main consideration.

A manufacturer of recognized Standard Goods, with a reputation to uphold and a guarantee to protect, must necessarily have higher prices than a manufacturer of cheap goods, whose idea of and basis of a claim for Standard Quality depends principally upon the eloquence of the salesman.

We know from experience that there is no quicksand more unstable than poverty in quality—and we avoid this quicksand by Standard Quality.



# STANDARD POLICY

A Standard Quality must be inseparably linked to a Standard Policy.

Without a definite and Standard Mercantile Policy, it is impossible for a Manufacturer to long maintain a Standard Quality.

To market his goods through the jobber, a manufacturer must provide a profit for the jobber as well as for the retail dealer. To meet these conditions of Dual Profits, the manufacturer is obliged to set a proportionately high list price on his goods to the consumer.

To enable the glib salesman, when booking his orders, to figure out attractive profits to both the jobber and retailer, these high list prices are absolutely essential; but their real purpose will have been served when the manufacturer has secured his order from the jobber, and the jobber has secured his order from the retailer.

However, these deceptive high list prices are not fair to the consumer, who does not, and, in reality, is not ever expected to pay these fancy list prices.

When the season opens for the sale of such goods, with their misleading but alluring high list prices, the retailer begins to realize his responsibilities, and grapples with the situation as best he can, by offering "special discounts," which vary with local trade conditions.

Under this system of merchandising, the profits to both the manufacturer and the jobber are assured; but as there is no stability maintained in the prices to the consumer, the keen competition amongst the local dealers invariably leads to a demoralized cutting of prices by which the profits of the retailer are practically eliminated.

This demoralization always reacts on the manufacturer. The jobber insists on lower, and still lower, prices. The manufacturer, in his turn, meets this demand for the lowering of prices by the only way open to him, viz.: the cheapening and degrading of the quality of his product.

The foregoing conditions became so intolerable that, 17 years ago, in 1899, A. G. Spalding & Bros. determined to rectify this demoralization in the Athletic Goods Trade, and inaugurated what has since become known as "The Spalding Policy."

The "Spalding Policy" eliminates the jobber entirely, so far as Spalding Goods are concerned, and the retail dealer secures the supply of Spalding Athletic Goods direct from the manufacturer by which the retail dealer is assured a fair, legitimate and certain profit on all Spalding Athletic Goods, and the consumer is assured a Standard Quality and is protected from imposition.

The "Spalding Policy" is decidedly for the interest and protection of the users of Athletic Goods, and acts in two ways:

FIRST.—The user is assured of genuine Official Standard Athletic Goods.

SECOND.—As manufacturers, we can proceed with confidence in purchasing at the proper time, the very best raw materials required in the manufacture of our various goods, well ahead of their respective seasons, and this enables us to provide the necessary quantity and absolutely maintain the Spalding Standard of Quality.

All retail dealers handling Spalding Athletic Goods are requested to supply consumers at our regular printed catalogue prices—neither more nor less—the same prices that similar goods are sold for in our New York, Chicago and other stores.

All Spalding dealers, as well as users of Spalding Athletic Goods, are treated exactly alike, and no special rebates or discriminations are allowed to anyone.

This, briefly, is the "Spalding Policy," which has already been in successful operation for the past 17 years, and will be indefinitely continued.

In other words, "The Spalding Policy" is a "square deal" for everybody.

A. G. SPALDING & BROS.

By   
President.

# SPALDING'S

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Price 10 cents each

GRAND PRIZE



ST. LOUIS, 1904



GRAND PRIX



PARIS, 1900

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A. G. SPALDING & BROS.

MAINTAIN WHOLESALE and RETAIL STORES in the FOLLOWING CITIES

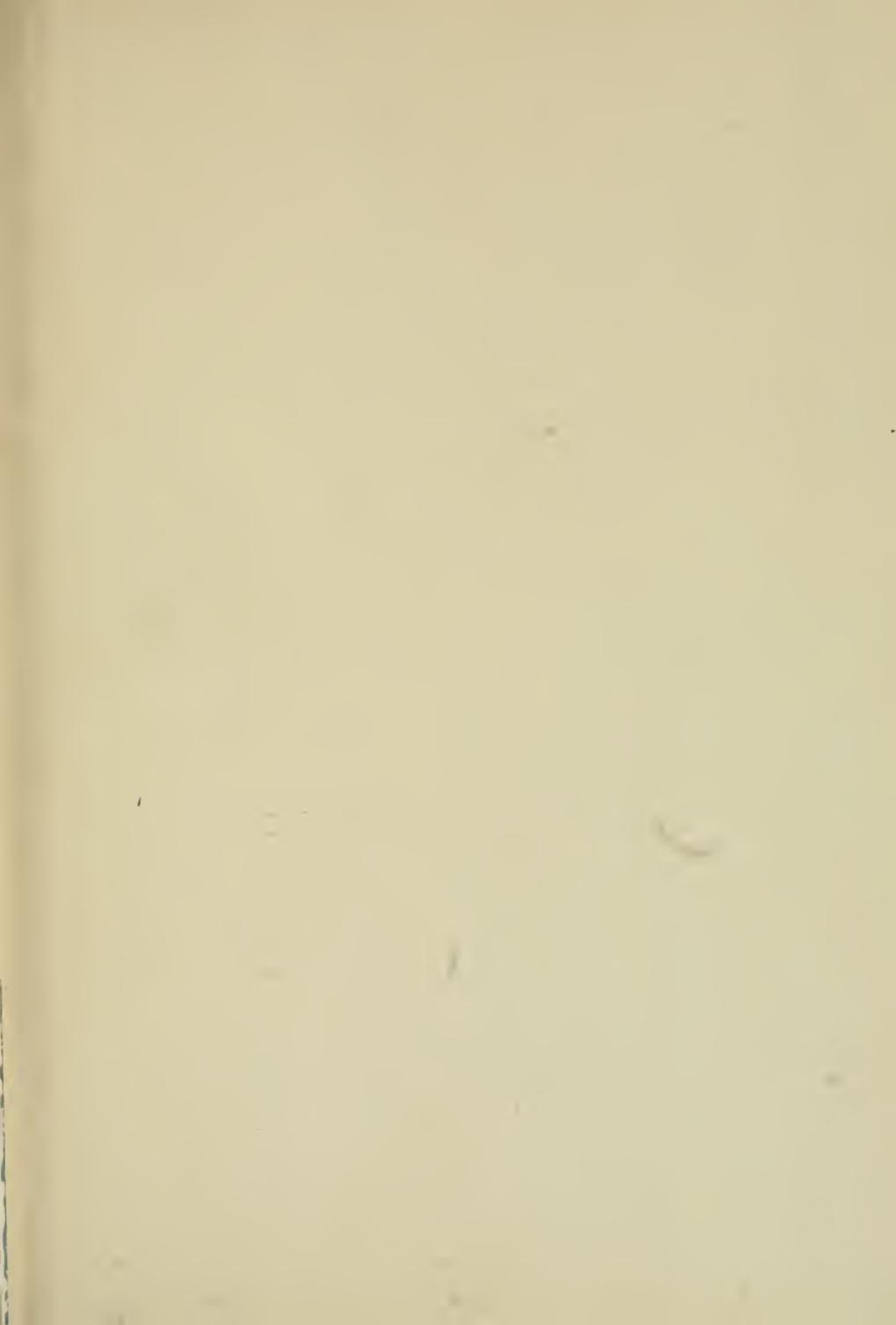
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Factories owned and operated by A.G. Spalding & Bros. and where all of Spalding's Trade-Marked Athletic Goods are made are located in the following cities:

NEW YORK	CHICAGO	SAN FRANCISCO	CHICOPEE, MASS.
BROOKLYN	BOSTON	PHILADELPHIA	LONDON, ENG.







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